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THE RETROBATES

FAVOURITE STAR WARS: ROGUE SQUADRON MOMENT



DARRAN JONES

Discovering that Factor 5 had somehow crammed a version of *Rogue Leader* into *Rebel Strike*. And being able to play the arcade trilogy was sweet too.

Expertise:
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine

Currently playing:
Scurge: Hive

Favourite game of all time:
Strider



NICK THORPE

Rogue Leader's opening mission on the Death Star blew me away – I'd never seen a game that looked so close to the film it was based on.

Expertise:
Owning five Master Systems (I sold two)

Currently playing:
Puyo Puyo Tetris

Favourite game of all time:
Sonic The Hedgehog



DREW SLEEP

Taking down AT-ATs on Hoth is the best rendition of any *Star Wars* set-piece in videogame form. I'll set my Wampa on anyone who disagrees.

Expertise:
The Kessel Run

Currently playing:
Persona 5

Favourite game of all time:
Final Fantasy VIII



SAM RIBBITS

Definitely when the Why?-wing shoots the big elephant things with its phase cannons! Boldly going where no game has gone before! Or something like that...

Expertise:
Ignoring *Star Wars*. 25 years and counting!

Currently playing:
Ori And The Blind Forest

Favourite game of all time:
Croc: Legend Of The Gobbos



DAVID CROOKES

I think simply being able to fly a good number of *Star War* spacecraft was a highlight for me.

Expertise:
Amstrad, Lynx, adventures, Dizzy, and PlayStation (but is it retro? Debate!)

Currently playing:
Lots of *Dizzy*

Favourite game of all time:
Broken Sword



ANDREW FISHER

Attacking the Death Star in *Rogue Leader* (GameCube) – it really felt like you were in the film.

Expertise:
Commodore 64 and Nintendo player for over 30 years

Currently playing:
Lego City Undercover

Favourite game of all time:
Paradroid



PAUL DRURY

Seeing the opening sequence of *Rogue Leader* on the GameCube made me dizzily excited about the new console. I still love the machine and this game is one of the many reasons why.

Expertise:
C16 cheat codes

Currently playing:
Chimera

Favourite game of all time:
Sheep in Space



MARTYN CARROLL

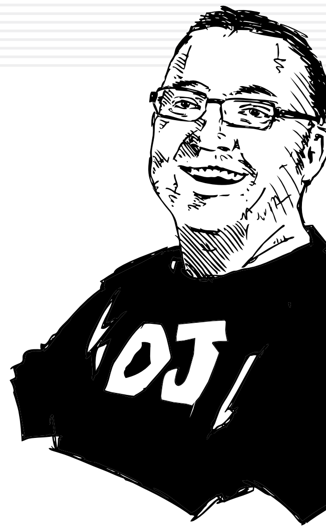
Has to be the opening Death Star attack from *Rogue Squadron II*. It was the perfect scene to show off your shiny new GameCube.

Expertise:
Sinclair stuff

Currently playing:
Gone Home

Favourite game of all time:
Jet Set Willy

LOADING...



I was born in the early Seventies, so *Star Wars* had a significant impact on my life growing up. I'd pretend I could use the Force, always asked for *Star Wars* toys for my birthdays and Christmas presents and would pick Luke Skywalker at school when we were playing *Star Wars* (I apparently wasn't cool enough to be Han Solo). I'm sure there are many of you who could tell me similar stories, so hopefully you'll be as excited as I am by our new cover.

As much as I enjoyed the *X-wing* games, *Rogue Leader* immediately impressed me when I encountered it on the N64. I can still remember walking into town and deliberating between buying *Rouge Leader* or Konami's *Castlevania* – thankfully, I made the right choice. As good as *Rogue Squadron* was (and it was very, very good) it's the amazing GameCube exclusive sequel that really blew me away and I'm delighted to reveal that we've tracked down five pivotal team members, including Factor 5's owner, Julian Eggebrecht to deliver a comprehensive look at the entire trilogy.

If you're not feeling the Force like me, then perhaps you'll find solace in our other fantastic features, that include the making of Nebulus and *Half-Life 2*, the history of Team17's *Alien Breed* series and a 40-year celebration of Commodore's PET.

Enjoy the magazine!



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>> Load 168 Breathing new life into classic games

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> "We wanted the game's physics to matter to how the overall game played"



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Grab your gravity gun and join Paul Walker-Emig to learn how this blockbuster sequel came to be



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Mike Bevan looks back at Team 17's top-down blasting series

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RETURN OF THE SPECTRUM

Henrique Olifiers discusses the next installment of the iconic home computer

On 23 April 2017 a landmark event occurred for Spectrum fans: the arrival of a brand-new addition to the popular brand. Launched on Kickstarter by Henrique Olifiers on the 35th anniversary of the original ZX Spectrum, the ZX Spectrum Next has already smashed its target of £250,000 and shows no signs of slowing down.



» Henrique cofounded the BAFTA-winning Bossa Studios and is heading up development on the Spectrum Next.

Not only is it a powerful new Spectrum system, it's also fully capable of using your favourite Spectrum joystick and playing your old games as well. We caught up with Henrique Olifiers to find out a little more about the exciting new piece of hardware.

Where did the idea for the Spectrum Next originate?
The original idea came up when Victor Trucco reached out to talk about his project called TBBlue, essentially a new board for the ZX Spectrum bringing SD card storage support, which people can buy and replace the original board inside their Speccys. Victor wanted me to help get the project to the UK, homeland of all things Spectrum. It immediately occurred to me that this had more potential than just a replacement board. What if we updated the hardware, brought it up to date, and had a design made by Rick Dickinson? Essentially wrapping it all together to replicate the elegant approach of the original with an out-of-the-box experience ready to go.

The next step was to reach out to Rick Dickinson, who immediately loved the idea. From there, it has been a constant work with the community learning what features they wanted, leading to the final design now that's fully crowdfunded.

Is it an officially-licensed product?
Yes, it is. We managed to secure the blessing and licensing of the trademarks and brands in exchange for part of the proceeds to go straight to charity, in this case the Royal National Institute Of The Blind. It was imperative to us to be able to talk about the Spectrum Next as a true Sinclair Spectrum evolution, and that just wouldn't be possible without the original brands.

Tell us a little about what's powering the Spectrum Next
At the heart of the Next is a FPGA chip implementing the original hardware down to the smallest details to ensure full compatibility with the original, from software (games, applications etc.) to hardware (expansion boards). Then we added extras such as a faster processor mode, HDMI/RGB/VGA output, more memory, SD card storage, optional modules such as Wi-Fi and real-time clock to take it further, bringing all the



facilities one would expect from a fully-expanded 8-bit computer. And we got greedy and started working on new video modes with 256 colours, Turbo sound, 3x AY sound chips and the external accelerator (essentially a Raspberry Pi Zero) to implement up-to-date hardware to the fold. With the proper drivers written for the RPi accelerator, the sky is the limit on what could be achieved, as having such a powerful CPU/GPU combo serving as a slave to the Next's Z80 means anything is possible as long as we write the right drivers for it.

What significant Spectrum developers are working on it?
We've got a few legendary figures such as Jim Bagley (*Midnight Resistance*, *Cabal* etc.), Jas Austin (*REX*), Miguel Guerreiro (ESXDos), Jonathan Cauldwell (*Egghead* series) and, if Jim is to be believed, we've got to dispatch a dev kit to Jeff Minter soon.

Will it be compatible with old cassettes or disks?
The Next has a cassette in/out port to load and save games from tape indeed, who doesn't love those screeching sounds while a screen is slowly building on the TV bit by bit? As far as floppy disks, though, no plans – although it's possible to attach any original interface to the Next bus (say an Interface 1 for Microdrive or a DISCiPLE interface). But in truth, with the build-in ESXDos and the SD card, there's very little need for floppy disks.

How does it differ from other Spectrum projects like the Vega?
The Spectrum Next is a full computer with keyboard, storage, monitor support, made for playing and programming – as well as bringing new ways to enjoy old games you loved with more speed and better video modes. Also, it's not emulated, we implemented real hardware on the FPGA. It's not just a nostalgic trip down memory lane: if you think of it, the Spectrum was, and now should be once more, one of the best computers to learn how to code – just flip the power switch on and start messing with coding and hardware immediately. It has none of the abstractions that put people so far from what a computer really is, how it works inside. As that, it is a beautiful educational tool.

When are you hoping to have the Spectrum Next finished?
The hardware already exists and runs as expected, although it will never be 'finished' as such because we will constantly expand it via firmware, both by the Next team and the community once we open source the code. The main production element ahead of us is the case itself, handled by Rick Dickinson's team. This is an expensive and complex endeavour that will culminate with the launch of the Next in early 2018, fulfilling our crowdfunding campaign.

Why do you think the Spectrum remains so popular?
The sheer elegance of it. A beautiful design packing guts that delivers against all odds through the ingenuity of its developers. It's easy to appreciate a hack, an elegant solution running on a machine where the boundaries are well defined, where the craft of squeezing the impossible out of it is obvious. This is lost on today's hardware, and I believe this is a part of the appeal of the Speccy. *

READERS REACT

We asked for your thoughts on the Spectrum Next

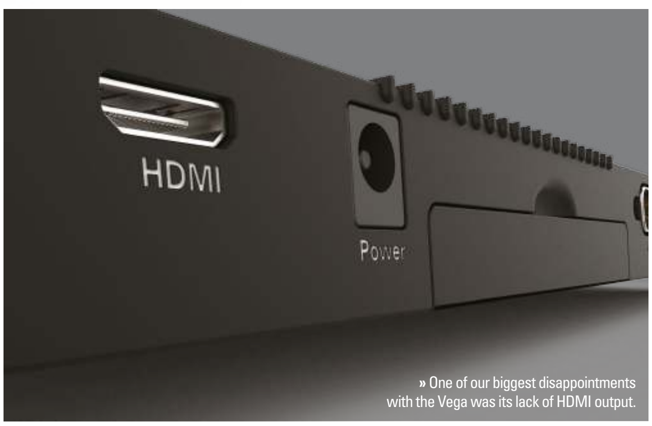
It looks lovely, but I can just fire up Fuse on my MacBook for the same experience.
If you really want an SD card loading system on a Spectrum buy a DivIDE… Now that's a great modern Spectrum peripheral, and you can pick them up for about £50 on eBay.
ianpmarks

Looks like I'm going against the grain but I've backed it. I have a space ready for it in my retro corner, will load the SD card up with as many games as I can and enjoy some of my childhood favourites.
PostieDoc

I'd like one, but I know it would be just another dust collector, no matter how good it is.
Antiriad2097

I wish it's a huge success; they've already got the money and look good for several of the stretch goals too, and if the finished product delivers the good at a reasonable price, I'll be giving it a good look.
Matt_B

Guys, the Next is not just a Spectrum in a new case. It offers a lot more than what could be achieved on the original hardware. I think that you will be surprised once you see some software and games that have been specially written for the system.
Swainy



» One of our biggest disappointments with the Vega was its lack of HDMI output.



» The Spectrum Next is an officially-licensed product. Needless to say, a lot of Spectrum fans are very excited.



» [ZX Spectrum] You'll be pleased to hear that all your classic tape-based games will work on the Spectrum Next.

> **"It was imperative to us to be able to talk about the Spectrum Next as a true Sinclair Spectrum evolution"**
> Henrique Olifiers

PROJECT Y BECOMES PAPRIUM

WATERMELON'S MEGA DRIVE BEAT-'EM-UP NEARS RELEASE

After four years in development, Watermelon Games has revealed a release date for its forthcoming beat-'em-up *Paprium* (formally known as *Project Y*), which will be out 16 September 2017. Mega Drive fans might remember this intriguing game from a story we ran back in issue 126, back when the first screenshots of the game emerged, and the developer came to prominence with the release of the Mega Drive RPG *Pier Solar* back in 2010.



Speaking to Watermelon's Gwénaël Godde, we had to find out why it's taken so long to get to this stage. "There were many reasons for this. The budget is tight for such a game so any issue can produce major delays," he explains. "Also, the limitations of the hardware requires specific skills that are nonexistent in the industry, so gathering a team is tricky and can take years."

Much more is now known about the game – five playable characters battle across 24 stages, and both arcade and original modes will be included. "The arcade mode lets you play a district of the Paprium megapolis. Each set of levels is linear and close to a classic beat-'em-up," says Gwénaël. "Original mode lets you navigate through the whole city with multiple paths and progression is saved. It's a lot more challenging! The original mode of *Paprium* is the mode you should play to get the whole experience."

In order to fit in this content, *Paprium* will use a hefty 80-megabit cartridge with save functionality included. The game also features a chip known as the 'Datenmeister' which adds extra audio functionality. "The Mega Drive is known for its good tunes, but also for its bad sound effects and drums. We used a backdoor Sega left for us to patch those issues," explains Gwénaël. "The chip adds extra channels of audio to the hardware for music and sound effects."



» [Mega Drive] This bar scene shows off *Paprium*'s cyberpunk look well, with laser lights flickering around.

The Mega Drive and its add-ons are already home to a number of classic beat-'em-ups including the *Streets Of Rage*, *Golden Axe* and *Alien Storm*. With that in mind, we were curious to know what *Paprium* offers over the existing games, but Gwénaël seems confident in Watermelon's work. "Haha, more of everything, possibly! More action, more levels, more gameplay, more music!"

Unlike *Pier Solar*, there are no plans to port *Paprium* to modern consoles at this point in time. "This game is made for the Mega Drive, porting it to modern systems wouldn't do it justice," Gwénaël tells us. "So far it remains a Mega Drive exclusive!"

Paprium is available from $69.99 and will be compatible with both PAL and NTSC machines. For more, visit the official website, paprium.com.

retroradar THE VAULT

THE COOL RETRO STUFF THAT WE'VE HAD OUR EYE ON THIS MONTH

The Making Of…

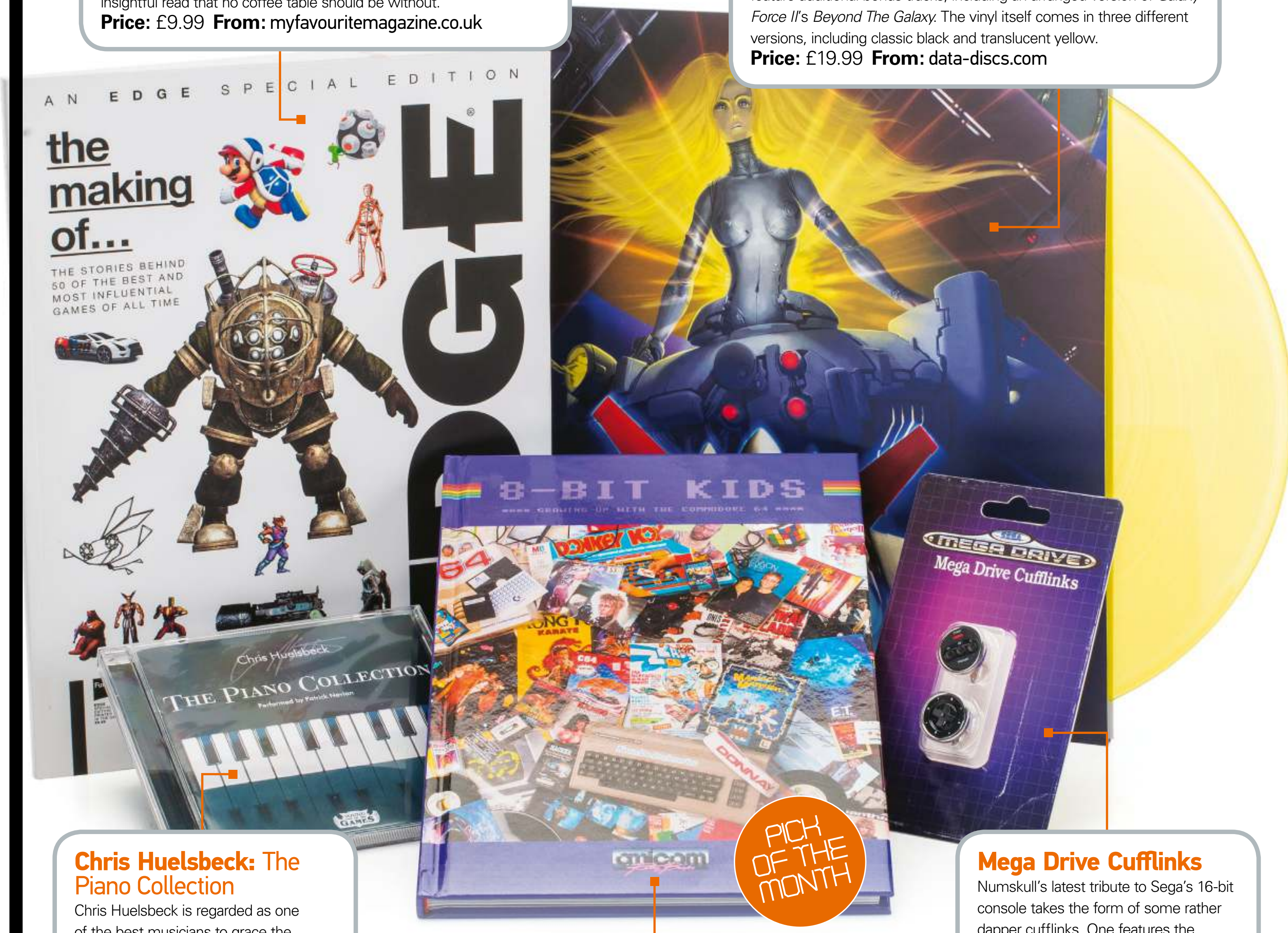
Created by our sister magazine *Edge*, *The Making Of…* features excellent behind-the-scenes articles about some of the greatest and most influential games of all time. Starting off with the story of *Pong*, 50 games are covered, including such diverse offerings as *Strider*, *Final Fantasy VI*, *Pipe Mania* and *Yakuza*, as well as more modern games that include hits like *Hotline Miami*, *Wolfenstein: The New Order* and *Bioshock*. Filled with iconic imagery and fascinating anecdotes, it's an insightful read that no coffee table should be without.

Price: £9.99 **From:** myfavouritemagazine.co.uk

Galaxy Force II And Thunder Blade

The tenth release from Data Discs highlights two classic Sega arcade games. Side A features the funky *Galaxy Force II* soundtrack, while the flipside is dedicated to the pumping tunes of *Thunder Blade*. The audio for both games was sourced from the original arcade machines, and feature additional bonus tracks, including an arranged version of *Galaxy Force II*'s *Beyond The Galaxy*. The vinyl itself comes in three different versions, including classic black and translucent yellow.

Price: £19.99 **From:** data-discs.com



PICK OF THE MONTH

Chris Huelsbeck: The Piano Collection

Chris Huelsbeck is regarded as one of the best musicians to grace the C64 and Amiga. After listening to this 18-track CD that features some of his best compositions, it's hard to argue otherwise. Composed by Patrick Nevian, it not only highlights what an accomplished pianist he is, but also serves as a historical guide to Chris' superb body of work. In fact, the only disappointment is the absence of *Turrican* and *Turrican 2*, with only the credits of *Turrican 3* making the final cut.

Price: £17.99

From: funstockretro.co.uk

8-Bit Kids: Growing Up With The Commodore 64

Koen De Brabander's new book is a little different to some of the other tomes we've featured in this section. Rather than simply focusing on the computers that were around during the late Seventies and early Eighties, it also pays tribute to numerous other entertainment mediums, including TV and film. Filled with classic imagery from the period, it sets the scene brilliantly, offering a real nostalgia trip for readers. There are a large number of fantastic adverts featured throughout the glossy book, as well as classic cartoons and images of a young Koen growing up with his friends. There are also notable interviews with a number of people involved with the C64 scene, including Andreas Wallstrom, as well as a forward by legendary C64 composer, Ben Daglish. Don't buy it for a history lesson, buy it to get a fascinating glimpse into someone growing up with a system they still love to this day.

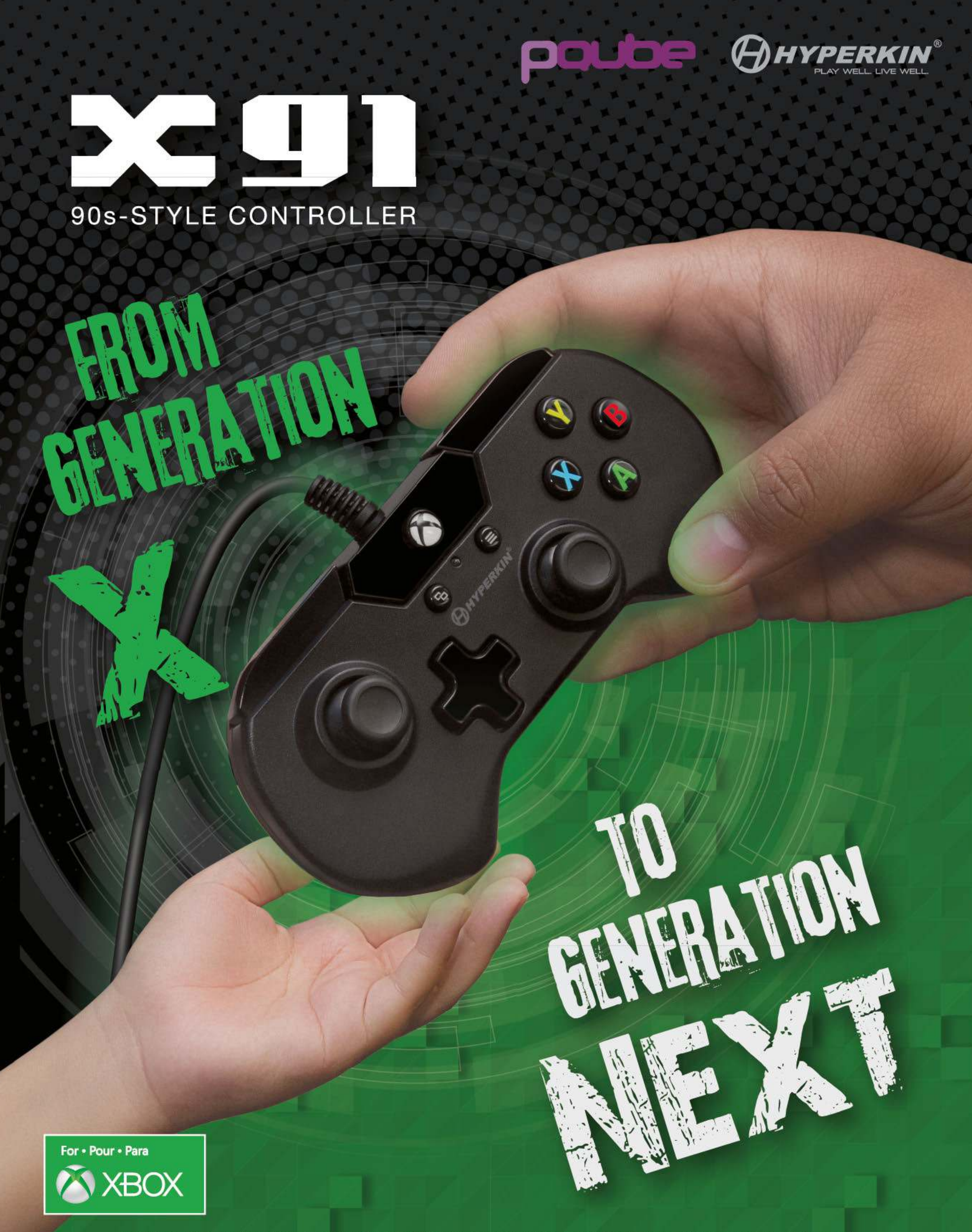
Price: €19.99 **From:** amicomretrobooks.be

Mega Drive Cufflinks

Numskull's latest tribute to Sega's 16-bit console takes the form of some rather dapper cufflinks. One features the iconic D-pad found on the Mega Drive's controller, while the other features the A, B, C and Start buttons. The swivel bar cufflinks are made from high-quality nickel and are officially licensed, making them perfect for the next time you decide to hit the town (or show up to the wedding of a Nintendo-loving friend).

Price: £9.99

From: funstockretro.co.uk



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Here's my bio... Paul Rose
Paul Rose is probably better known as Mr Biffo – the creator and chief writer of legendary teletext games magazine *Digitiser*. These days, he mostly writes for kids TV, but can still be found rambling on about games, old and new, for his daily website, Digitiser2000.com.

Mind Games

So, I was thinking. You know how over the years we've been told countless times by sensationalist outlets that violent videogames can affect the developing brain, and that they turn kids into murderers, and that? Well, I've been pondering: have videogames changed my brain? How did games affect me growing up?

Scientific studies suggest that violent games can increase players' aggression levels by a small amount, but that refers to the immediate effects. Other studies have shown evidence that playing games can improve motor skills. We know that games can be addictive, that they can deliver a dopamine hit that's akin to eating chocolate or doing a rude thing.

After some considerable digging around, I have learned there's very little research on how gaming affects the development of personality. Having played them since I was eight or nine, I want to know whether games has fundamentally changed my personality. In short: did they contribute towards making me who I am?

The ongoing 'nurture versus nature' debate is moot, given that who we are is a combination of factors. Some of them are ingrained in our DNA, and that typically affects the way in which we're influenced by external forces in our environment. Theoretically, games can be one of those external forces – especially if, like me, they comprised a massive part of your formative years.

We carry around in our heads the voices of significant individuals who were important to us growing up; parents, teachers, siblings. The 'conditions of worth' they instil in us – 'Boys don't cry', 'You're a failure if you don't get good grades' – can conflict with our true self.

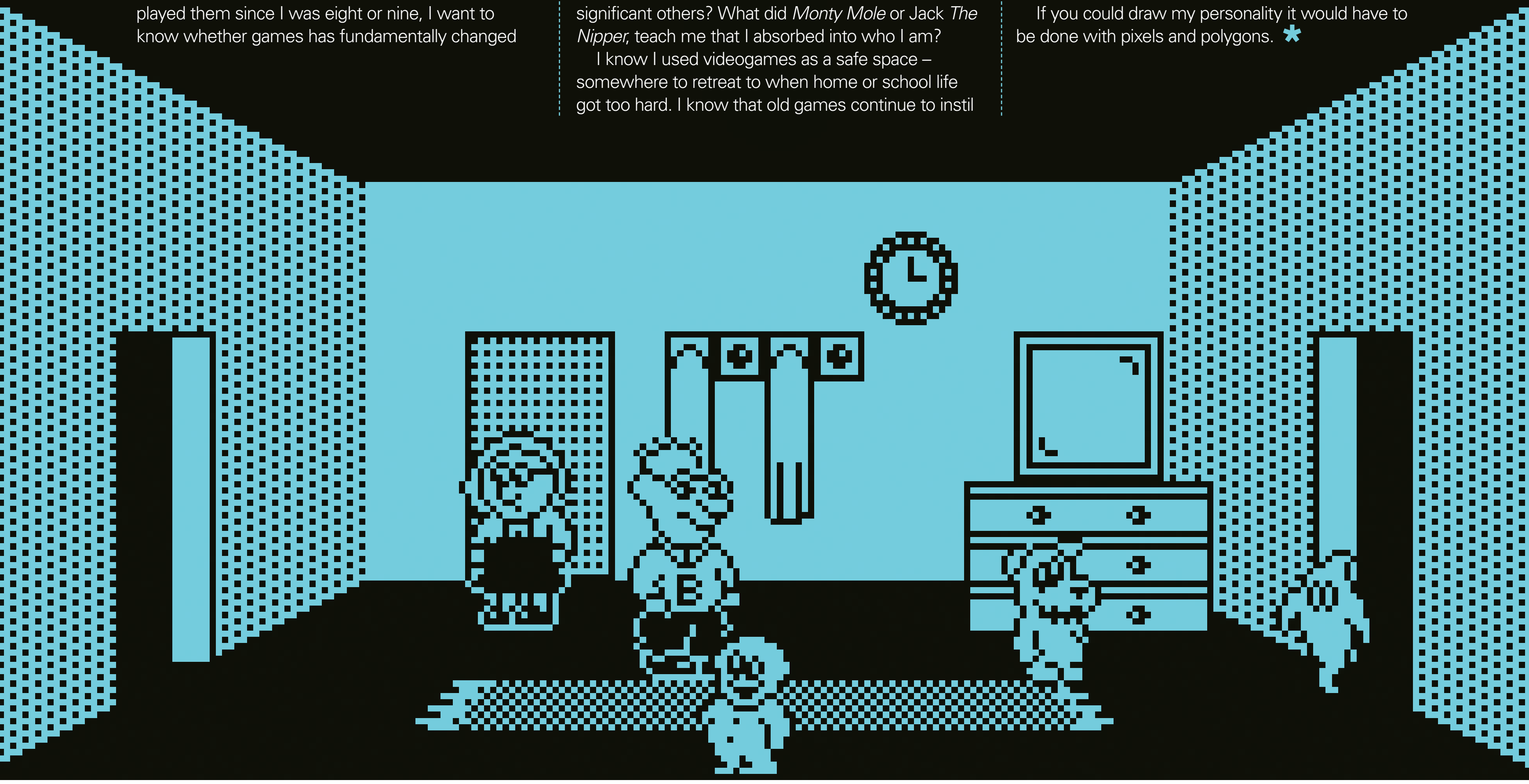
Were there games I played as a kid which acted in the same way, to a greater lesser degree, as these significant others? What did *Monty Mole* or Jack *The Nipper*, teach me that I absorbed into who I am?

I know I used videogames as a safe space – somewhere to retreat to when home or school life got too hard. I know that old games continue to instil in me a warm, fuzzy feeling of safety. They remain to this day somewhere I retreat to when times get hard.

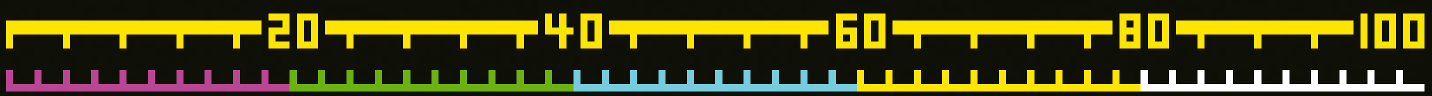
Yet that's somewhat different to them moulding me. I could speculate that continues and save games showed me that you get nothing by giving up in life. Miner Willy's mansion and *Castle Master 3D* imbued me with a curiosity, a desire to explore empty places; I often like being alone. I've believe that you don't need to get 100 per cent in something – be it collecting all the coins or giving over 100 per cent of your life to a career – in order to get the rewards.

But really, this is clutching at straws. Without being able to lay a finger on the specifics, I can feel games shaped me – how could they not have done? – but the way in which they did so is out of reach. It could be that they're so deep down in who I am that there's no reaching them, no shining a light, because they're right there at the foundations.

If you could draw my personality it would have to be done with pixels and polygons. *



BIFFOMETER



Do you agree with Paul's thoughts? Contact us at:

RetroGamerUK @RetroGamer_Mag darran.jones@futurenet.com



Retro Radio

Retro Asylum host Paul Davies on creating the UK's most popular retro podcast

HEAD TO RETROASYLUM.COM TO DOWNLOAD THE LATEST PODCAST

Originally set up by Dean Swain, Andy Godoy and Glenn Atkinson, Retro Asylum has now become the most popular retro podcast in the UK. It won two major awards in 2015 and 2016 and continues to go from strength to strength thanks to its excellent content and entertaining interviewees. We caught up with host Paul Davies to discover a little more about the hit show.



» The Retro Asylum team with Archer Maclean (left), Jim Bagley (middle left) and Steve Turner (right).

Where did the idea for Retro Asylum originate?

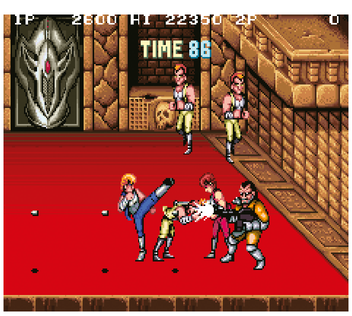
The legend I heard was that Dean Swain and Andy Godoy first met at an arcade over a game of *Double Dragon*. Their shared passion for retro gaming and beating up the Black Warriors gang was the catalyst for the rest of us to come on board and take the show on its long journey to the present day.

How many people are typically involved with each episode?

It really depends on the show format. We normally like to have three hosts so there's always someone to keep things bouncing along nicely, while a developer interview works best as a one-on-one conversation, as you can really focus on the subject. However, for our big shows like 8-Bit Wars we all get involved as they're great fun to record and we get to take the mickey out of each other!

What sets you apart from other retro podcasts?

Probably our longevity! The show's been going strong since 2011 and that's a testament to the commitment of everyone involved and the retro community for supporting what we do. We were the first to look at the scene from a UK perspective and wanted to come over like an overheard conversation between a couple of mates in a pub. We've always kept that philosophy and ensure every show is about having fun: combining the research people want to hear from a system and games perspective with chat about our childhood memories which resonate with our listeners.



» [Arcade] Dean is a big fan of *Double Dragon*. You'll hear him discussing it. A lot…

What was it like to win two major podcast awards?

We're humbled by the continued support of both our listeners and peers who have helped us win awards in successive years. The best part about winning is that we've put retro gaming on the map above current-gen gaming and other big names in broadcasting. The problem is, after winning UK's best and then world's best in 2016 where do we go from there?

How hard is it to get developers to appear?

It was a challenge initially as podcasting was still finding its feet as a medium. However, we've established credibility in the community to the point where people come to us to tell their stories. I believe that interviewing is an art form; it's less about asking a list of preprepared questions and more about being a listener, with both parties going where the conversation flows. I was honoured when Shahid Ahmad told me our interview together was the best he's ever done. Coming from an industry legend like him was a massive compliment.



» [SNES] Paul has a number of favourite games, including *Ant Attack* and *Super Mario Kart*.

What advice would you give to anyone starting a podcast?

My advice is just do it! If you've got a story to tell and the passion to turn an idea into a piece of broadcasting don't let anything stop you. Yes you'll cringe at your earlier efforts but learn on the go and always be open to feedback. We're always keen to help to promote new shows so if you decide to take the plunge be sure to let us know. ✱





DISCUSS

What's your retro gaming guilty pleasure?

Forum
www.retrogamer.net/forum

■ Probably LaserDisc games. *Rebel Assault*, *Dragons Lair*, *Space Ace*, and so on. Very limited gameplay, but I enjoy the audio and visuals although nowadays games can do that stuff on the fly anyway!
kiwimike

■ *Dropzone* on the C64. I was firmly in the Spectrum camp at school, and I still am. It's such a playable game though…
mrmessy

■ *Wonderboy* on the C64. Given a scarcely believable 52% from *Zzap!* back in the day, its my go-to C64 game when I fire up the emulator, and I even prefer its gameplay to that of its arcade counterpart. So take *that*, *Zzap!!*.
ncf1

■ Being a cricket fan, I spent hours playing *Howzat!* on my Speccy which is a, frankly, terrible game which scored a generous score of 11% in *Crash* magazine.
jdanddiet

■ *Muscle March* for the Wii. Running as a Polar bear in speedos never gets old.
Mayhem

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■ *Bart Vs The World*. One of the first games I played, so the nostalgia tinge is strong, even if the game is trash.
@lithiumproject

■ For whatever hellish reason, I'm one of the 12 fans of *Friday The 13th* (classic NES) #JudgeMe.
@SuperScroggz

■ TG16's *China Warrior*! Boring, repetitive gameplay but the huge, colourful sprites in the TV commercial were the reason I bought the system.
@guido23

■ *Shadow Warrior* on the Mega Drive. It's crap, I know it, but I can one-credit it so it makes me feel like a ninja.
@ShabbaRanksMF

■ *Rise Of The Robots* for me. I know it's terrible but it was the first game where I experienced the hype… Looks nice though.
@TheXboxVision

■ *The Main Event* in the arcade. I know it's not great. Awesome memories though. Everyone sighs when I mention it.
@GWils2

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■ I'm pretty sure all of my favourite retro games qualify as guilty pleasures. *Except Croc*.
Mitch Wallace

■ It's got to be *Mission Impossible* for the N64/PSone. Awful controls, the story is all over the place considering it's meant to be based on a film and the visuals are questionable – but it's shamelessly fun to play every few months.
Dayle Cartwright

■ *The Great Space Race* on the ZX Spectrum. Actually a true inspiration for me. I totally buy into the whole, 'it's a real living universe' thing ... Even though I know that it isn't!
Graz Richards

■ *Chuckie Egg II* on the Amstrad. I loved it!
Iain McGarry

■ *Gulf Storm* (Dooyong, 1991). A Mediocre shoot-'em-up, but very fun to play in the wake of the first Gulf War, though it wasn't very related to it, except for the ending screen featuring a rather badly-drawn Saddam Hussein.
Vasco Serafini



What We Think

■ Sonic the who? Oh, you mean the blue dude from that 3D GBA fighter!' Sadly *Sonic Battle*'s less-than-graceful battle mechanics and forgettable story were my first impressions of *Sonic The Hedgehog*, but at the time I didn't know any better. Now I'm older, wiser… and still about to play it. Damn it!





GTA VICE CITY
"What a game, the only one I've queued up at midnight for! I'm a big fan of anything by Rockstar, and *Grand Theft Auto* is a great series."
PAID: £39.99

SUPER METROID
"This is one donation of many from my awesome brother-in-law, Sam, who found a load of awesome games and consoles in his parent's loft and gave them all to me."
PAID: £0

MICRO MACHINES
"A very addictive game, especially with a few mates. I love racing games, right up to the ones on my PS4 and Xbox One, but still none of them have captured what Codemasters did."
PAID: £12

R-TYPE
"The first shoot-'em-up I ever played, and on my Speccy. Love this game, and great memories."
PAID: £0

JEWEL IN THE CROWN

MEGA MAN X
■ "A series I wasn't really into, but was always tempted to collect for. This was another game given to me by my brother-in-law and I'm so grateful to him. What a legend."
PAID: £0



BIO

NAME: Tom Rabett

JOB: Postman

ESTIMATED VALUE: £12,000-£15,000

FAVOURITE SYSTEM: Mega Drive / PlayStation 2

"I LIKE TO THINK THE SHED IS NOT JUST FOR ME, BUT FOR EVERYONE I KNOW TO ENJOY RETRO GAMING"

SHED CRED

Readers take us through the retro keyhole

Tom, like many of our collectors, has always been a gamer, but has only recently taken up the hobby of acquiring a collection. "I fancied going back and playing a few of my favourites and ended up finding so many games I'd missed or not played at the time," he explains. "And from there it just turned into a passion." Unfortunately, Tom's passion soon led to a common problem: space. Or rather, lack of it. "I didn't have enough room for my collection. My dad has a fairly sizeable garden which he was finding hard to maintain, so we came up with the idea of buying a shed/workshop and converting it." Once the seed had been sowed, the idea became very quickly. "The shed was put up in a day, and it took a couple of weeks to insulate, board out and paint. The final job was the electrics."



We think our readers will agree that the result looks pretty amazing, and Tom is justifiably proud of his impressive 'Man Cave'. "Probably my favourite feature is the projector," he reveals. "I know it's not every one's cup of tea, but for a very small outlay you can play *Sonic* on an 80-inch screen! It's fantastic as well for my regular bank holiday gaming tournaments, as I like to think the shed is not just for me, but for everyone I know to enjoy retro gaming." This has even extended to Tom's nephew who recently enjoyed a rather cool birthday party within the Rabett den, the lucky lad.

As for gaming systems themselves, Tom is a huge fan of the Mega Drive and PlayStation 2, but has discovered many more consoles through his collecting. And a striking collection it is – but what does his partner think of it? "She's actually very supportive," he says, "and whenever she's in a charity shop and sees a videogame, she's straight on the phone to see if I have it! However, birthdays and Christmas are becoming a bit harder for her to find a game that I haven't got!" Meantime have a look at that beautiful shed. Colour **Retro Gamer** green with envy. ✱



SENSIBLE SOCCER
"The best soccer game in my mind, awesome gameplay and a popular choice in my bank holiday tournaments."
PAID: £10

BACK TO THE NOUGHTIES

APRIL 2000 – As if jealous of the arrival of the PS2, every format offered something good this month – which was just as well, because Sony's new console wasn't impressing the press. Join Nick Thorpe for a trip in the DeLorean…





[Dreamcast] *Dead Or Alive 2* wowed critics from *Dreamcast Magazine*. PS2 owners had to wait but received more content.

NEWS APRIL 2000



On 13 April, Metallica drummer Lars Ulrich filed a lawsuit against Napster alleging that the company had enabled copyright infringement through its peer-to-peer file sharing software – the first such lawsuit filed by an artist against a file sharing software company. The band had been made aware of Napster after a demo version of the song *I Disappear* was leaked. The band was furious that its whole back catalogue up for grabs in MP3 format at no cost and filed the lawsuit, with other artists soon following. The case was later settled with a $26 million payment to artists and copyright owners.

In the early hours of 22 April, agents of the US Immigration and Naturalization Service raided a property in Miami to take custody of six-year-old Elián González, a young boy at the centre of a heated custody battle. Elián's mother Elizabeth had perished when they fled Cuba together on a boat with a faulty motor, and he was placed with maternal relatives in the US. However, Elián's father Juan Miguel demanded his son's return to Cuba. Courts ruled that as a minor Elián could not seek asylum on his own and should be returned to his father's custody, but the predawn raid proved controversial, particularly following the publication of a picture of a terrified Elián being taken by armed agents.

THE LATEST NEWS FROM APRIL 2000

The big stories didn't get too much bigger than Sony's PlayStation Festival 2000, a celebration of the brand-new PlayStation 2 with 500 demo pods showcasing the system's upcoming software. UK journalists were all too eager to share their impressions of the event in Tokyo, but, surprisingly, the news was pretty gloomy. "As expected, it wasn't difficult to find disappointing software," said the *Edge* report, which described *American Arcade* as "a good demonstration of how not to do pinball games" and Konami's Jikkyou *World Soccer 2000* as "a severe disappointment". *Ridge Racer V*, *Street Fighter EX3*, *Tekken Tag Tournament* and *Gran Turismo 2000* were noted as the hits of the show. Scorn was shown towards *0 Story*, an FMV-based game that had *Arcade* warning that "your worst fears have come true," but the biggest beating was reserved for EA's *Snowboard Supercross*. *Edge* noted that the game suffered from "horrific frame-rate fluctuation", while *Arcade* branded it as a "laughing stock" and claiming that "heads must surely roll for this".

For those of us looking to stick with the original Sony console for the foreseeable future, there was some particularly welcome news concerning cheaper games. Sony had revised its guidelines to create a new pricing tier below the £19.99 Platinum budget range, allowing for games to retail at £9.99 under the Value Series label – an ultra-budget range distinguished by a yellow stripe on the front cover. The first company to jump on the opportunity was Codemasters, which reintroduced popular titles like *Colin McRae Rally*, and other publishers quickly followed suit in reintroducing their back catalogue titles. Budget publishers such as Midas Interactive also seized the initiative, releasing previously-unreleased Japanese games that would have struggled at full price, including *Ski Air Mix*, *Prism Land* and *Sanvein*.

Though the UK market was being served with some prominent releases, the biggest game of the month was an import – *Biohazard: Code Veronica*. The latest game in Capcom's popular survival horror series (better known as *Resident Evil* here) focused on Claire Redfield's search for her brother Chris,



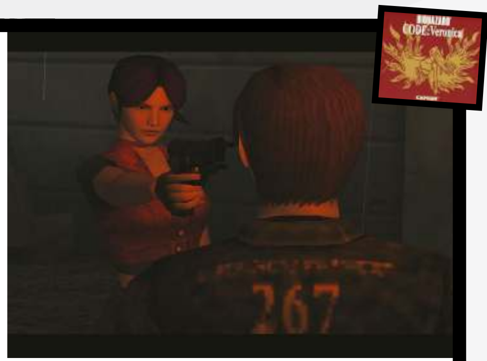
[PlayStation] *Fear Effect* was a stylish game, but also one that struggled with control issues during combat.



[Neo-Geo Pocket Color] You wouldn't believe how long we've spent playing SNK vs *Capcom: Card Fighters' Clash*.



[N64] Nintendo's console still had plenty to offer despite the arrival of newer systems, as this excellent racer proved.



[Dreamcast] Claire Redfield is somewhat suspicious of *Resident Evil* newcomer Steve Burnside.

who had disappeared after the events of the original game. *Edge* offered the game 8/10, saying that it "cements the series' reputation as the undisputed genre leader," while *Arcade*'s Nick Jones offered it the full five stars, noting that "what you lack in control compared with *Resident Evil 3* on PlayStation, *Code Veronica* makes up for in atmosphere and cinematic set-pieces."

While UK gamers had to wait for their dose of zombie-killing action, other big games were being reviewed at home. *Dead Or Alive 2* had just been announced for PlayStation 2 but was already available for Sega's machine, and offered superb visuals, amazing multitiered 3D fighting arenas and a high-speed fighting style that emphasised counter-attacks. Of course, like its predecessor, it also offered an array of scantily-clad female fighters with some gratuitous breast physics. *Dreamcast Magazine* offered it an excellent 91% – the same score as it gave *Ecco The Dolphin: Defender Of The Future*, the triumphant return of Sega's aquatic hero. The character's first 3D adventure was stunning to look at and very well-designed, although the puzzles were somewhat mind-bending.

PlayStation owners had a couple of big games to choose between, too. *Syphon Filter 2* followed up from the surprise 1999 hit, with Gabe Logan returning to action on the run from the Agency after discovering its links to the *Syphon Filter* bioweapon. The stealth action gameplay that had resulted in comparisons to *Metal Gear Solid* wasn't radically altered, but technical improvements were abundant. In a four-star review, *Arcade* noted that, "989 Studios is teetering on the edge of coming up with something fantastic and just can't find the momentum to finally push the *Syphon Filter* franchise over the edge," while *Edge* offered a 7/10 and claimed that, "The tension, subtlety and sheer variety throughout go a good way towards moving this game out of the shadow cast by Hideo Kojima's masterpiece." The highly-touted action-adventure game *Fear Effect* from Kronos sported an excellent cartoon-like aesthetic, but offered a surprisingly adult storyline that took the player through unusual locations such as a Chinese brothel and even Hell itself. The game's atmosphere and inventive puzzles received praise from the gaming press, but the control scheme was found wanting – *Arcade* said that the auto-targeting system didn't work, while *Edge* noted that it made boss battles "absurdly difficult." Still, it received a good four stars from *Arcade* and 6/10 from *Edge*.

Things were also rosy on other formats. N64 players got to experience the thrills of Namco's excellent *Ridge Racer 64*, with *N64 Magazine*'s Mark Green calling it "easily one of the N64's most exhilarating games" in a 91% review. PC gamers got *Thief II: The Metal Age*, a brilliant stealth sequel that got the full five stars from *Arcade*, and even Neo-Geo Pocket Color owners got the amazing trading card battle game *SNK vs Capcom: Card Fighters' Clash*, which was described by *Arcade*'s Jamie Sefton as, "One of those rare titles that seems to appear from nowhere, but surprises you by delivering a game that's fresh, fun and incredibly addictive." Could these good times last? Find out next month… *

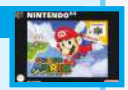


[PS2] Releases like *Ø Story* had magazines worried that FMV games would make an unwelcome return.

CHARTS

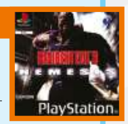
APRIL 2000

NINTENDO 64



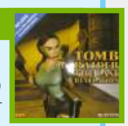
1 Super Mario 64 (Nintendo)
2 Toy Story 2 (Activision)
3 WWF Wrestlemania 2000 (THQ)
4 Resident Evil 2 (Virgin)
5 Vigilante 8 (Activision)

PLAYSTATION



1 Resident Evil 3: Nemesis (Eidos)
2 Gran Turismo 2 (Sony)
3 Toy Story 2 (Activision)
4 ISS Pro Evolution (Konami)
5 Medal Of Honor (Electronic Arts)

DREAMCAST



1 Tomb Raider: The Last Revelation (Eidos)
2 Rayman 2 (Ubisoft)
3 Legacy Of Kain: Soul Reaver (Eidos)
4 Virtua Striker 2 (Sega)
5 ECW Hardcore Revolution (Acclaim)

MUSIC



1 Toca's Miracle (Fragma)
2 Fill Me In (Craig David)
3 Thong Song (Sisqo)
4 Who Feels Love? (Oasis)
5 He Wasn't Man Enough (Toni Braxton)

THIS MONTH IN…



Edge

This month's big feature was a roundtable on storytelling, featuring interviews from Demis Hassabis and Gary Penn. Revolution Software's Charles Cecil was also interviewed, and said that he found the dialogue in *Metal Gear Solid* "tedious", but believed that it was the victim of a substandard localisation.



Arcade

The news pages hold intriguing talk of Microsoft's new "X-Box" console. The console would reportedly be launching in September 2000, featuring a 600MHz CPU, DVD compatibility and a hard disk, as well as the ability to use high-speed internet connections. All this for $300? Too good to be true, surely…



N64

After finally receiving a finished 64DD unit, *N64 Magazine* was able to review the device. The team was unimpressed with *Doshin The Giant* and *Mario Artist: Paint Studio*, and concluded that the long-awaited peripheral would be "nothing more than an intriguing curio for completist retro gamers in years to come".


PS4
FEISAR
race for e-unity
wipEout™
OMEGA COLLECTION
OUT 7TH JUNE
7
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WIPEOUT IS BACK



Only On PlayStation.
FEISAR

THE HISTORY OF...

STAR

ROGUE S

Everyone wants to be a pilot after watching Star Wars, and Factor 5 and LucasArts delivered the next best thing with their series tie-ins. Nick Thorpe is your copilot on this mission to find out how they were made...

With all the excitement over the revitalisation of *Star Wars* under Disney's ownership, it's easy to forget that the latter half of the Nineties was a magical time to be a *Star Wars* fan. The original trilogy was remastered to unanimous acclaim and absolutely no controversy whatsoever, and production was underway on the first film in the beloved prequel trilogy, *Star Wars Episode I: The Phantom Menace* – a film which would finally satisfy fans' desires for intergalactic trade negotiations and buffoonish CGI mascots. [You're really selling your argument here, Nick – Ed.]

Fine, you got us – the late Nineties gave us some of the most extraordinarily divisive *Star Wars* media. However, while it's easy to criticise the finished products in hindsight, the simple fact that a new *Star Wars* film was on the way did create a buzz around the series for the first time in years. What's more, if you ignore the films and focus on videogames, *Star Wars* was still delivering the goods. The likes of *Dark Forces* and the *X-wing* series were hits, and even the misses had some merit. *Rogue Squadron* definitely became one of the hits. However, it was a non-*Star Wars* LucasArts game that planted the seed of what would eventually become *Rogue Squadron*.



» [PC] Although the default was a third-person view, this cockpit view put you at the heart of the action.

"We had been fascinated by real-time landscape 3D engines since the classic Atari 8-bit computer game *Rescue On Fractalus* in the early Eighties," explains Julian Eggebrecht, cofounder of Factor 5. In fact, the two companies had made some headway on a sequel called *Return To Fractalus* for the Amiga in the late Eighties, before deciding that the hardware couldn't sufficiently advance the concept. "By 1994 it was clear that the first generation of consoles made for 3D would have the right mix of technology to attempt the game again, and we signed yet another contract with LucasArts for *Return to Fractalus*," Julian continues. "As fate would have it, right around that time they signed a three-game exclusivity deal for *Star Wars* games on the shiny new Nintendo 64. We had been begging them for a while to give us creative access to *Star Wars*, so then-president Jack Sorensen decided to finally give in and granted my wish to turn our *Fractalus* project into a *Star Wars* game."

More inspiration was provided by *Shadows Of The Empire*, a Nintendo 64 launch title which wasn't consistent enough to be a true classic, but had some very impressive high points. "The Hoth snowspeeder level on *Shadows Of The Empire* was recognised widely as one of the most fun, playable portions of that game. The





» [PC] Missions sometimes require you to escort a friendly, often less well-armed craft.

initial pitch was to take that, and expand on it," explains LucasArts alumnus Ryan Kaufman. As a basis for the game, this was an instant differentiating factor from the existing *Star Wars* combat flight games. "Making an *X-wing* game for console was never even under consideration," Ryan confirms. "The *X-wing* franchise was doing quite well on PC. I think they wisely decided to make *Rogue Squadron* more approachable, for a console audience used to a different kind of gameplay."

The two companies split the burden, each handling different aspects of the game. "Factor 5 made the engine, worked closely with Nintendo to maximise usage of the N64, they wrote the music; they were the genesis of the idea," explains Ryan. "LucasArts were close partners with them, helping flesh out the actual content, and making sure it was true to the *Star Wars* universe." This would be the role that Ryan would play during development. "I was a level designer at that point, and I'd worked on *Outlaws* and *Jedi Knight*," he continues. "I didn't know much about flight-action games, but I knew how to make a level that felt like a story unfolding."

"My pitch was to make *Rogue Squadron* a greatest-of-the-movies, free-roaming action game, but Lucasfilm licensing granted only part of it," recalls Julian. "What they didn't allow was to mix original content with battles from the movies – we had to stay original in our ▶

ROGUES GALLERY



JULIAN EGGEBRECHT
Producer, *Rogue Squadron*
Director, *Rogue Leader* and *Rebel Strike*



MIKE KEITH
Software engineer, *Rogue Leader* and *Rebel Strike*



RYAN KAUFMAN
Level designer/writer, *Rogue Squadron*



CHRIS CRAWFORD
Mission design director, *Rogue Leader* and *Rebel Strike*



JAMIE UHRMACHER
Mission design director, *Rogue Leader* and *Rebel Strike*

story." The plan to fulfil this goal was to instead adapt other Star *Wars media* – specifically, the *X-wing* novels. "Initially, Mark Haigh-Hutchinson had culled a bunch of interesting *Rogue Squadron* missions from the novels. You were going to play as a member of Rogue Squadron, post-*Return Of The Jedi*, and follow those missions," explains Ryan. "That's why the Mon Calamari mission is in there. If I remember correctly, it's a scenario that happened in one of the books or comics."

However, retelling the Extended Universe stories soon took a back seat to a more commercially appealing approach, which allowed the game to fill in the blanks between films, as Ryan recalls. "When Kevin Schmitt (lead level designer) and I came on, we pressured Mark to make Luke Skywalker the main character, and set the missions mostly between *A New Hope* and *Empire Strikes Back*. He went for it!" It was an approach that wouldn't have been feasible in years past, but by the N64-era consoles had the power to deliver immersive *Star Wars* experiences on par with other media – instead of being simple tie-in products, they could become part of the *Star Wars* story in their own right.



» [PC] The only major graphical compromise in *Rogue Squadron* is the use of distance fog.

With the setting firmly in place, the feel of the game had to be nailed down. "Our basic design for *Rogue Squadron* flowed very naturally from my main inspiration for how a 3D *Star Wars* game should feel, and that was the 1983 vector arcade *Star Wars* game from Atari," explains Julian. "I wanted to merge the free-roaming intuitive gameplay of *Rescue On Fractalus* with the guided, on rails, crazy visceral movie-like feeling of Atari's *Star Wars*." However, this proved to be a difficult task for the programming team. "Initially, making the flight control feel really good was a difficult thing to get right. There's actually a huge amount of difference between designing a snowspeeder and designing an X-wing," Ryan remembers. "That caused Mark Haigh-Hutchinson a lot of grief, getting that just right. He'd often work all day and bring us a build to test, hoping he'd finally nailed it – and we'd shake our heads, 'Sorry, buddy, not quite.' But he kept at it, kept having creative breakthroughs and eventually, made something pretty special."

That wasn't the only challenge that the teams struggled with. While the N64 had no problem displaying 3D graphics, programming 3D movement was a different matter. "The other big problem was the enemy AI – they couldn't fly on their own. It was too processor-intensive to calculate flight paths on the fly, so we had to create splines the TIEs and other flying enemies could follow," remarks Ryan. "Believe it or not, most of the flying enemies were generated and followed strict spline paths. Only a few were free-flying enemies. And funny enough those were not very fun to fight! As level designers, used to creating scenarios where the enemies had robust AI, we had to adjust how we designed combat."

Late in development, another problem reared its head – the teams hadn't actually been developing the game for a standard N64 console. "We had made the mistake of developing the game with the memory expansion in place at all times, and not limiting access for the artists to that memory. When the time came to ship the product, we feared we might not be able to bring it back into the four megabytes that a normal N64 had," Julian admits.

> "We got the okay to secretly include the Naboo Starfighter"
> **Julian Eggebrecht**

Facing the possibility of having developed a game that was beyond the console's capabilities, LucasArts and Factor 5 tried two simultaneous solutions. "While also desperately working on compression techniques, we made the pitch to Nintendo to turn a problem into a win by releasing the hardware expansion. They hadn't planned for it since it always was meant to be a part of the 64DD add-on drive, but not a standalone product." Fortunately for the *Rogue Squadron* staff, they had help from an unexpected external source. "We were lucky that Acclaim's *Turok 2* team ran into the same memory problems and also pitched Nintendo this idea for that very same Christmas period. That gave enough weight to it, and finally they relented." In the end, the team did manage to fit *Rogue Squadron* into a standard N64, but owners of the Expansion Pak got an improved experience in the form of a high-resolution mode.

Despite the challenges, Ryan remembers that his colleagues from the other team found time to have fun. "The Factor 5 guys were classic console game programmers and designers. To them including unlockables… that was just what you *did*. You owed it to your fans!" Of course, once the LucasArts team realised that the game was going to have such secrets,

ENTER THE HANGAR

Here are some of the many iconic Star Wars vehicles you can pilot in the Rogue Squadron series…



T-47 AIRSPEEDER
ROGUE SQUADRON/ ROGUE LEADER/REBEL STRIKE

X-WING
ROGUE SQUADRON/ROGUE LEADER/REBEL STRIKE

A-WING
ROGUE SQUADRON/ROGUE LEADER/REBEL STRIKE

MILLENNIUM FALCON
ROGUE SQUADRON/ROGUE LEADER/ REBEL STRIKE

JEDI STARFIGHTER
REBEL STRIKE

Y-WING
ROGUE SQUADRON/ROGUE LEADER/REBEL STRIKE

SLAVE 1
ROGUE LEADER/REBEL STRIKE

B-WING
ROGUE LEADER/REBEL STRIKE



» [GameCube] Protecting the gas platforms at Bespin requires some tricky attacks on this Imperial gun platform.

they couldn't help but get in on the fun. "We got into that too," Ryan confirms. "I created the Beggar's Canyon level and the bonus Hoth level. And Jeff Kung developed the Death Star level – kind of fulfilling a childhood dream!" However, one secret stands above all the others. "To top it off, late in the production cycle we did get the okay to secretly include the Naboo Starfighter as a deeply-hidden unlockable, and managed to keep that a secret until the movie came out," Julian proudly explains.

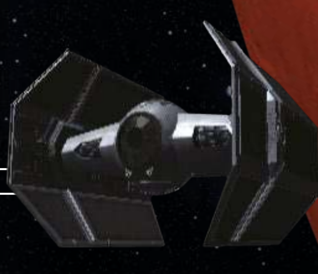
When *Star Wars: Rogue Squadron* was released for N64 and PC in December 1998, it was a critical success. The combination of free-roaming flight and intuitive controls made the game's missions a joy to play, and with a variety of missions ranging from protecting friendly targets to search-and-destroy outings, there was plenty to do. What's more, it was technically stunning – few N64 games could compare graphically. Commercial ▶



TIE INTERCEPTOR
ROGUE SQUADRON
ROGUE LEADER/REBEL STRIKE



TIE FIGHTER
ROGUE SQUADRON ROGUE LEADER/REBEL STRIKE



TIE BOMBER
REBEL STRIKE

Q&A: JAMIE UHRMACHER

The mission design director provides further insight into Rogue Leader and Rebel Strike

What was it like working on such high-profile games?
Rogue Leader was the first game I worked on. It was an incredibly exciting, exhausting and memorable experience. We were a small team and hungry to prove ourselves. The team really bonded under that competitive spirit to create the best GameCube launch title. The positive reaction to the 'Space World' debut certainly energised us. I'm incredibly grateful to have started my game development career on that project with that team.

What additional benefits did working on the GameCube provide?
The GameCube certainly provided increased graphical horsepower to recreate the most realistic *Star Wars* visuals to date. That realism is in no small part due to the tireless work of Factor 5's engineers and artists. They used every trick in the book to push the GameCube hardware to its limits.

We've heard *Rebel Strike*'s development was quite difficult, why was this?
Rebel Strike's development had its fair share of difficulties, but paled compared to the learning curve, high expectations and compressed schedule of *Rogue Leader*. Most of the difficulties were related to the character sections. First, the flight engine had to be expanded to support portal and sector technology for the interior environments. The aging tools struggled to support this additional tech. When the underlying character mode design wasn't panning out, the flawed tools and tech workflow made iteration difficult and slow, ultimately hampering the ability to course-correct.

Why were the third-person sections added?
We didn't want to just make '*Rogue Leader: More Missions*'. The team felt a good game sequel should be one third the same, one third improved and one third new. The new third was the character sections. Also, the previous games may have left players only connecting with the craft, not the pilot. So character sections attempted to support that fantasy fulfilment of being Luke, Han and Leia.

How do you feel they hold up today?
The character sections were the weakest part of the game when it was released. They haven't stood the test of time, especially considering the emergence



» [GameCube]Negative criticism of *Rebel Strike* was squarely aimed at the on-foot, third-person levels.

of third-person cover shooter genre conventions following *Gears Of War*. Also character models and animations tend to age worse compared to vehicle and environment art.

What was the hardest thing to solve from a gameplay point of view?
We underestimated the learning curve for creating a best-in-class, third-person, character-based shooter. Much of the team possessed little genre experience and picked the wrong games to emulate. Early versions looked to *Robotron* for inspiration, which requires a locked overhead camera and hordes of enemies. The locked overhead camera didn't provide the cinematic feel of *Star Wars*. And slaughtering a hundred Stormtroopers felt tonally wrong. *Devil May Cry* was another inspiration for its tight controls, intimate combat and cinematic feel. However, it was a melee game at heart.

Why was the ability to play *Rogue Leader* missions in multiplayer added?
If a third of a good sequel is improvements upon the original, then I think the third improved was the *Rogue Leader* co-op campaign. These missions benefited from an additional player, design hindsight, new AI tech and improved visuals.

Why do you think the series remains so popular with gamers?
Dogfighting is a core *Star Wars* fantasy. And *Rogue Squadron* focused on accessible, arcade dogfighting with movie-quality visuals. It's easy to pick up and play, but difficult to master. *Star Wars* vehicles don't suffer from the same sort of uncanny valley that characters do, so they hold up visually today.



TIE HUNTER
REBEL STRIKE

ENEMY LINES

Here's a selection of the most memorable conflicts from across the Rogue Squadron series…

HOTH
MUSTAFAR
BESPIN
ENDOR
DEATH STAR
MYGEETO
YAVIN 4
FELUCIA
OUTER BORDER
MID RIM
EXPANSION REGION
INNER RIM
COLONIES
CORE WORLDS
INNER CLUSTER
CORUSCANT
ALDERAAN
CORELLIA
KASHYYK
KILE II
NABOO
DAGOBAH
UTAPAU
KOTHLIS
TATOOINE
KAMINO
GEONOSIS

DEATH STAR ATTACK

ROGUE LEADER



■ Here's an opening mission that makes an incredible first impression – flying over the surface of the Death Star in your X-wing, you take out towers and TIE Fighters before descending into that famous trench for the ultimate wish fulfilment.

SPEEDER BIKE PURSUIT

REBEL STRIKE



■ The Speeder chase was one of the best things about *Return Of The Jedi*, and it's no surprise that it's great in videogame form too. While you're dodging trees and blasting Stormtroopers, just think how far gaming has come since *Deathchase*!

DEFECTION AT CORELLIA

ROGUE SQUADRON



■ This mission sees you defending a city from marauding TIE Bombers, in one of the most graphically impressive scenes in the game. Han Solo also drops by in the Millennium Falcon in order to lend you a hand, since it's his home under attack.

VENGEANCE ON KOTHLIS

ROGUE LEADER



■ This mission sees you finishing off a Star Destroyer – first by taking out the support from TIE fighters and then by bringing down some marauding AT-AT's with your trusty tow rope.

ATTACK ON KILE II

ROGUE SQUADRON



■ After lots of defence and rescue, this mission finally lets the Rebel Alliance's finest cut loose and perform some search and destroy gunning. Narrow canyons make this a treacherous but thrilling environment to fight in.





» [GameCube] The constant fire in battle scenes is impossible to depict accurately in still shots.



» [GameCube] *Rogue Leader* allowed you to take part in some of the most famous scenes from the movies.

"The game was completely built around the hardware"
Julian Eggebrecht

success followed, to a degree the team hadn't expected. "We hit right in the middle of the rerelease still being in people's minds, and everyone being excited about *Episode I*," Julian explains. "The game ended up being the most successful ***Star Wars*** game for years."

Plans were quickly set in motion for a sequel, with LucasArts abandoning the original plan for *Rogue Squadron*'s sequels to be based on the new prequel trilogy. "After the success of *Rogue Squadron*, LucasArts gave us carte blanche to try anything and everything that we wanted to do," says Julian. LucasArts weren't the only ones that had noticed the game's success, either. "Nintendo contacted us and invited us to the GameCube hardware design team after they saw and more importantly, heard what we did with *Rogue Squadron* on the N64," he continues. "Our technology lead, Thomas Engel, knew every bit of the chipset inside out and was able to use the visual and performance side of the next *Rogue Squadron* as a case study for the hardware. The game was completely built around that hardware, and some of the hardware around the game."

That might sound like a luxurious arrangement, but *Rogue Squadron II: Rogue Leader* was a game developed with some major constraints. The improvement wish list was long and time was short. "Frame-rate, detail, controls, music, sound effects, you name it we wanted it. And, of course, I finally wanted to realise my original pitch to recreate the actual movie scenes, and nicely weave in and out of original versus movie material," explains Julian. "*Rogue Leader* was tailored around those wishes and the very brief development time of nine months. We cherry-picked what was possible to be done well in that timeframe." Former Factor 5 developer Chris Crawford joined during the game's development and still remembers the pressure. "It was a launch title and we didn't have much time," he confirms. "We knew it was important for the platform and critical for us as a studio to deliver something great and on time, and I think every person in the studio had self-imposed pressure to make the best *Star Wars* game we could."



» [GameCube] *Rogue Leader* was the first time we'd ever agreed with claims of 'movie-quality' real-time graphics.

Despite this compressed development schedule, the combination of strong technology and people who knew it well proved potent, as *Rogue Leader* was a visually stunning game. "The GameCube tends to not get the respect it deserves from a technical point of view. It was a powerful machine and fantastic to develop for," says Mike Keith, formerly of Factor 5. "I remember one day crowding around in Holger [Schmidt]'s office to watch the Yavin flyby cutscene – the first sequence that we got up and running. It was amazing. The hairs on the back of my neck stood up and I actually got misty eyed."

How was this achieved? "One of the unique bits that made the game look so good is that Thomas and I had been focused on cinematic real-time shaders even in the late N64 days and we knew exactly what we needed to bring the look of *Star Wars* perfectly alive," Julian explains. "Other teams were years away from using normal mapping, or real-time shadows, etc., things that *Rogue Leader* all had. The craziest ahead-of-its-time bit is that we managed to do full global illumination on the GameCube, something that didn't appear anywhere else until a full console generation later with open-world games."

Chris was also impressed with the extra power of the GameCube. "Visually we could do some very impressive cross-faded level of detail switches for massive objects like the Star Destroyers as well as smaller objects like fighters," he explains. "Early-on the team built a Star Destroyer that looked great both from a distance and up-close, running at high FPS on the prototype hardware. I was blown away by what the tech could do. We were also able to not only render more enemies at once, but the enemies were able to have more sophisticated behaviours," he continues. "The TIE Fighters in *Rogue Squadron* were more or less locked onto their paths. On the GameCube we were able to give enemies AI that let them chase the player and fly in different formations. The same AI was used to let players direct their wingmen to form up or attack various targets. This might have been possible in previous generations, but not on the scale or at the frame-rate that the GameCube allowed."

The additional power did create new challenges in terms of game design, particularly because of the expanded environments. "It's very easy for players to get lost, especially in space, and we worked hard on systems that assisted them to minimise that. Back then mainstream console players still struggled with 3D," explains Mike. "Finding non-frustrating ways to direct players to objectives was sometimes tricky, as well as keeping people oriented in the space levels," Chris concurs. "We always tried to provide clear visual landmarks so players wouldn't have to rely too much on the HUD. For example in Ison Corridor Ambush mission, the level took place inside a giant tunnel of nebula clouds and followed a large convoy of ships. This made it easier for players to identify 'forward' and 'back' and keep their bearings. Plus it just looked cool."

Additionally, even though CPU power allowed for enemies to have more autonomy, this still didn't make for fun gameplay, as Chris explains. "Getting the ▶



SECRETS OF THE JEDI

Each of the three Rogue Squadron games was packed with loads of cool secrets, each of which could be accessed via the Passcodes section of the Options menu. Here are five of our favourites…



NABOO STARFIGHTER

STAR WARS: ROGUE SQUADRON

■ Perhaps the best-kept secret of any N64 game, as it wasn't discovered for months. To get this *Episode I* craft, enter HALIFAX? Followed by !YNGWIE!, then start the game on a non-Snowspeeder mission. You'll find the Naboo Starfighter to the left of the X-wing on the ship selection screen.

DEATH STAR TRENCH

STAR WARS: ROGUE SQUADRON

■ WOISTHAN unlocks this movie mission. "Jeff Kung discovered that the topographic height maps we used to create levels, couldn't be bigger than a certain size," Ryan reveals. "He didn't have enough room to really lay out a long trench, like we saw in the movies. So he had to add corners!"





AT-ST MISSION

STAR WARS: ROGUE SQUADRON

■ "The one thing I remember wanting, and bugging the F5 guys to put in, was a playable AT-ST scout walker," Ryan recalls. "They told me a million times, 'No way, we can't possibly include that.' And of course, being old school coders, they then *had* to put it in as a secret." CHICKEN unlocks this.

THE BUICK

ALL THREE!

■ For some bizarre reason, sound designer Rudolf Stember's Buick Electra 225 became a recurring secret in the *Rogue Squadron* series. KOELSCH unlocks it in *Rogue Squadron*, !ZUVIEL! then !BENZIN! does the job in *Rogue Leader*, and AXCBPRHK followed by WHATTHE? works for *Rebel Strike*.



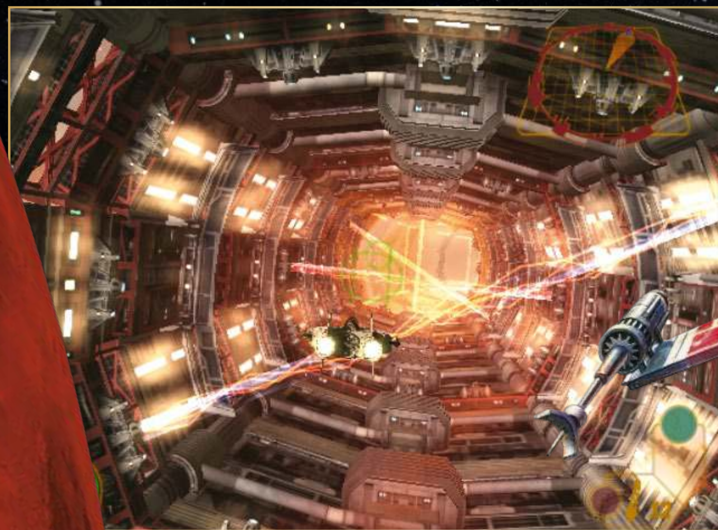




CLASSIC ARCADE GAMES

STAR WARS ROGUE SQUADRON III: REBEL STRIKE

■ All three of Atari's arcade games are present in *Rebel Strike*, allowing you to indulge in retro vector fun. To unlock *Star Wars*, enter RTJPFC!G then TIMEWARP. *Empire* unlocks with H!F?HXS then KOOLSTUF, and *Jedi* with !?ATH!RD then GAME?YES.



» [GameCube] Missions didn't just test your skill as a gunner, but your agility as a pilot.



▶ dogfights to be fun and not too overwhelming was a challenge too. Although we had new AI tools to play with. A good deal of time was spent crafting paths for enemies and managing when they used the paths and when the AI was set free to attack."

Incredibly, the teams at LucasArts were working on the similar game *Star Wars: Starfighter*, but weren't aware of *Rogue Leader*'s development. When they did learn of it, the resulting friction put the entire *Rogue Leader* project in jeopardy, as Julian recalls. "When the legendary teaser trailer at the GameCube unveiling was played, most people at LucasArts were in shock," he explains. "They tried to have *Rogue Leader* killed to prevent the game from overshadowing *Starfighter*, and almost succeeded due to Microsoft offering LucasArts incentives to move *Rogue Leader* to the Xbox. It was a nasty four months of political wrangling with us at Factor 5, as Nintendo technology partner, caught in the middle."

Thankfully, the game survived and the high-pressure development produced a diamond of a game. Thanks to its astonishing visuals, focussed game design and excellent recreation of key movie scenes, *Rogue Leader* is the undisputed high point of the trilogy. Upon its launch in November 2001, it received universal critical acclaim and became the best-selling third-party game of the GameCube's launch lineup. When the GameCube launched in the UK the following May, *Rogue Leader* actually became the first ever third-party game to hit the top of the UK charts during a console launch.



» [GameCube] The prospect of playing as Luke Skywalker on the frontlines of Hoth was tantalising for any *Star Wars* fan.





» [GameCube] Co-op mode was definitely one of the highlights of the otherwise underwhelming *Rebel Strike*.

“We just wanted to capture the excitement we felt as kids”
Chris Crawford

With the same team working on the same platform, but with the benefit of additional experience, *Rogue Squadron III: Rebel Strike* should have been an instant classic. On paper, it has all of the ingredients to be considered the high point of the series, yet it's more often noted as the black sheep. “With *Rebel Strike* we bit off way too much,” Mike laments. “We were looking at about 18 months development time and thinking: ‘Given how little time we had for *Rogue Leader*, think how much new stuff we can cram in!’ Burn out was also a factor. The company was going through growing pains too.”

Though *Rebel Strike* included the same action that had been so great in the previous games, it introduced on-foot sections which allowed the player to control heroes directly. “The weak spots in the game are the on-foot missions. That clearly was a mistake, but then there is also a slight feeling of ‘leftovers’ in *Rebel Strike* since *Rogue Leader* really grabbed some of the key levels,” says Julian. The idea of doing on-foot gameplay seems sound – what went wrong? “We hadn't done that gameplay before and we struggled,” says Mike. “When you're trying something new in game development, you need to have the resolve to axe it if it isn't working. We spent months trying to get those on foot sections to be fun, but couldn't do it. We should've cut our losses and killed them, but that's easy to say in hindsight.”



» [GameCube] Stilted animations and an awkward camera blight the on-foot gameplay sections of *Rebel Strike*.

While the campaign was disappointing, the new cooperative mode was excellent, due to the fact that it used the missions from *Rogue Leader*. But why use the old missions rather than the new ones? “When we did the *Rogue Leader* design document, it had the co-op multiplayer in there but due to time we couldn't get it done,” Julian recalls. “So partially it happened in *Rebel Strike* as a proof-of-concept that we could push performance so much further that we could run *Rogue Leader* twice, and secondly it was just a blast to work on a multiplayer version of the levels we were familiar with.” This proved to be a major technical undertaking, but one which added a huge amount of value to the game. “Multiplayer brought up all manner of interesting challenges,” says Mike. “Not only did we have to rewrite huge chunks of the code base to add the concept of multiple players, but a lot of the optimisations worked because they assumed there would only be one camera (viewpoint) at any given time, so we had to find new methods to get the performance we wanted.”

Rogue Squadron III: Rebel Strike launched in October 2003 to a critical reception that was still broadly positive, but markedly less so than that of its predecessors. The flight combat and cooperative mode were positively received, as was the inclusion of classic *Star Wars* arcade games, but the on-foot missions were singled out by the majority of critics as the major negative point.

Regardless of the disappointing conclusion to the trilogy, it's fair to say that Factor 5 and LucasArts created something special with the *Rogue Squadron* series. Few *Star Wars* games have so expertly captured the feeling of making heroic strikes at the Empire, whether they're recreating the movies or adding to the legend as in *Rogue Squadron*. “The gameplay holds up well. And people mention [*Rogue Squadron*] to me a lot as one of their favorite N64 games, so I'm proud of that,” says Ryan. “We just wanted to capture the excitement we felt as kids watching the space battles and playing with our *Star Wars* toys,” Chris remarks. “[*Rogue Leader*] holds up well,” agrees Mike. “We were a team of passionate fans, we worked hard. Our mantra throughout was that we wanted to make the player feel like they were Luke Skywalker, and I think we did a pretty good job of that.”



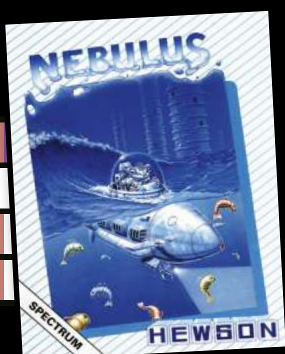
» [GameCube] Improved explosion effects were one of the key visual upgrades to *Rebel Strike*.

But for Julian, the *Rogue Squadron* story is one which remains unfinished. “When we designed our ideal *Star Wars* game, it was a blend of *Rogue Leader* and *Rebel Strike* – in fact it exists as *Star Wars Trilogy: Rogue Squadron* for the Wii,” he explains, referring to an unreleased game that combined the existing games while fixing some features and adding new ones like lightsaber battles. “Both games merged together felt perfect, and of course that was finally realized on the Wii. The Hoth level on the Wii is probably the best *Rogue Squadron* level ever, since it merged all of *Rebel Strike*'s Hoth and *Rogue Leader*'s Hoth into one epic mission.”

“It would be nice to see that game released in some form since it was the ultimate *Rogue Squadron*,” Julian continues. “I am still holding out hope that it will happen, especially because it was also some of the best work of the team.” It's a tantalising thought to leave us with, and one that leaves us with a new hope that the *Rogue Squadron* series might take flight again in the future. ✱

THE MAKING OF

Uridium seems an unlikely inspiration for a platformer, but then Nebulus started out as a shooter. John M Phillips tells Rory Milne how a revolving cylinder evolved into an 8-bit classic



IN THE KNOW

- » **PUBLISHER:** HEWSON CONSULTANTS
- » **DEVELOPER:** JOHN M PHILLIPS
- » **RELEASED:** 1987
- » **PLATFORM:** C64, VARIOUS
- » **GENRE:** PLATFORMER

During the Eighties, many UK games coders favoured a single system, but some Spectrum specialists also converted their work to the Amstrad, and certain C64 developers had cut their teeth on the BBC B. Less common, however, were programmers who worked on all four popular computers, but John Phillips was one such coder, and, as he explains, in mid-1987, his *Uridium*-inspired follow-up to the critically-acclaimed *Impossaball* was about to switch systems and to take influence from a game written for a third. "My setup back then was that I had a BBC Micro," John begins, "which was the main machine. It had a cross-compiler and was hooked up by parallel ports to a Spectrum and C64. [*Nebulus*' towers] started out as horizontal cylinders scrolling across the screen left to right – that was on the Spectrum. Basically there was a spaceship that went along the cylinder surface, and there were abstract aliens spinning around it. When I switched it over to the C64, that was when technical challenges began causing problems. I was using character maps – that was the reason for why the towers were done vertically. One of my favourite games at the time was *Frak!*, on the BBC, and I just fancied doing something like that."

As well as platforms and monsters, *Frak!* also boasted a colourful lead in Trogg the caveman, and soon John set about designing a multihued hero of his own,



» [C64] Between levels, Pogo is tasked with catching fish with a bubble gun in a submarine.

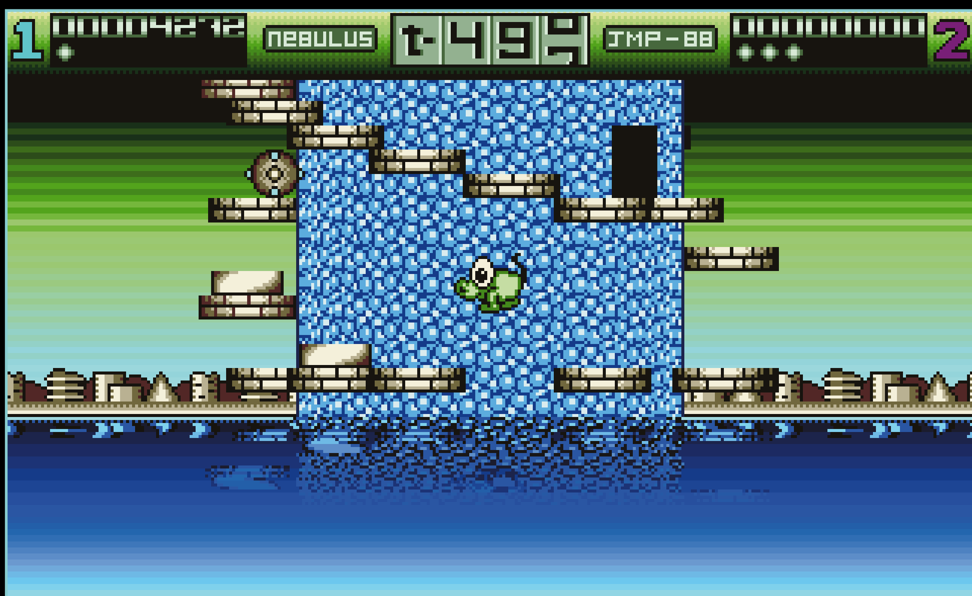


» [C64] Get hit by an enemy and you'll drop downwards, leaving you precious little time to reach the tower's zenith.

one that was brave enough – and small enough – to enter the doors that he planned to implement in his game's revolving cylindrical towers. "Half the game ran on the BBC, I either had an art package or I made one, and I wrote a sprite editor," John remembers. "It was all organic; I just started writing the game. I think Pogo came first, he was one of the first things I did, I think most of the other characters came as the game developed. Once I got onto the C64, I realised I needed a character. I think there were several before Pogo. It was just a case of finding 'something' that could rotate, and of a size that he could fit through the doors."

That 'something' was part-pig and part-frog, but if Pogo looked odd, then John's other characters – Pogo's geometric foes – looked surreal, although their appearance was dictated by ease of animation rather than design. "They were mainly down to necessity; they had to be symmetrical. They had to be drawn in 16 frames of animation, with all the rotations. Those limitations meant that you were very limited in what you could do – I had to be able to draw them, this was before 3D art packages. But it appealed to me [that the enemies looked surreal.]"

Of course, Pogo and his strange foes needed a world to inhabit, which required John to write a 2D level editor to make his rotating tower mechanic playable. A byproduct of which saw upcoming threats that were visible in two dimensions become hidden



» [Amiga] After outsourcers failed to deliver an Amiga *Nebulus*, John Phillips produced the conversion himself.

dangers when depicted in 3D. "The way I designed the towers was I had a level editor; you could lay levels out on a grid. I'd design a tower, add it to the game, play it, change things and play it again. Once I could finish a tower, it was okay. Because of the way that I designed it, the level editor showed a flat grid – 16 cells wide. So it wasn't until you actually played the game that it was wrapped around a tower. [The obscured hazards were] just a happy accident!"

A less-happy experiment followed, as John tried to connect the towers he was designing by combining a number of them on-screen to form battlements. "I was just trying to find ways to link the towers into an overall world. I think there were a number of ideas for that. Because of the way I was rendering, you drew everything from the front to the back so it didn't matter how many things you had on the screen – the game's frame-rate would be constant. The idea didn't work. I had a prototype, but I just abandoned it."

One positive of John's abandoned 'battlements', however, was that they gave him the idea of having the doors on his towers lead to corridors, which he retooled to work with single towers. "They looked cool!" John enthuses. "I added them to the level editor, tried the game and realised they worked. I think they were originally [connected to] the battlements idea; the battlements needed some way of transferring you from one tower to another. It was just one of those silly ideas I had. You have a corridor, and you have Pogo rotating, and entering and exiting at either end. I just realised it worked and stuck with it."

John also stuck with Hewson Consultants – the publisher of his most recently-published title – where the helpful staff and persistent boss gave the designer advice and motivation, respectively. "Hewson published my previous game *Impossaball*. They kept on contacting me and asking what I was doing. They were quite a small company; it was virtually Andrew Hewson and a couple of staff in the office. They had a producer – Paul Chamberlain – and he gave some input. And so did another guy – Barry Simpson. I had to go up to Hewson every couple of months, every time I did a different version of the game. I'd loads of different versions exploring different graphic styles. Andrew Hewson was good at pushing me. He'd phone up and say: 'Have you thought about this?' And I'd go away and think about it."

Much of what John thought about evolved into gameplay elements for his rotating towers, including dissolving and destructible platforms – the latter of which would cause obstructions and backtracking, and required John to arm Pogo with snowballs. "We ▶

NEBULUS 101

■ Essentially a vertical platformer, albeit one that's set on the outer walls of a series of rotating towers, *Nebulus* combines platforming standards with novel gameplay. So when he's not negotiating elevators and disintegrating floors, the game's protagonist is tasked with dispatching foes and removing obstacles by throwing snowballs at them.

NEBULUS 2

The Amiga sequel that took Nebulus to the next level

Developed by German developer Infernal Byte Systems, *Nebulus 2* features eight towers – as with the original game – but additionally tasks players with climbing down and repairing each tower after reaching their summits. As well as doubling the challenge, *Nebulus*' successor also makes improvements to the towers functionality, with the pick of the enhancements being switches that reveal hidden platforms and doors, transporters that Pogo can beam between and moving platforms that the intrepid protagonist can hitch a lift on.

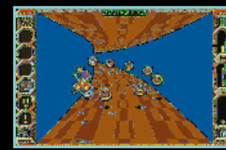
Other additions include collectibles ranging from keys to jet packs to bouncy trainers – respectively required to unlock doors, dispatch anything in Pogo's path and jump higher – and a broader range of foes – inspired by nature, sci-fi, haunted house inhabitants and everything in between.

Understandably, the second *Nebulus* also has better visuals than any version of the first, which is at least partly explained by the fact that the sequel was specifically designed for the Amiga.

Embellishments aside, the gameplay in *Nebulus 2* remains as rock-hard as its predecessor's, and as with the original game, the extremely challenging nature of the follow-up guarantees replay value. That's not to say the second instalment of *Nebulus* crushes your enthusiasm – tricky sections do become easier once practiced – it's more that the game punishes you if you make a half-hearted attempt at a section you think you've mastered. That said, there's nothing more satisfying than reaching the top – or bottom – of the towers in *Nebulus 2*, and this likely explains why the game holds such a strong 'just one more go' appeal.

wanted to have destroyable blocks. It was just a case of making them a different size from the normal blocks – and making them flash was an easy thing to add. You could force backtracking, that was an easy matter. I think originally there was no shooting. But then we realised that destroyable platforms would be good, and then how do you destroy them? The snowballs were just … well, you needed something large enough so that you got to see it. You had a starfield at the back, and bullets would have just looked like stars."

Besides a starfield, on the advice of Hewson's boss, John's evolving game soon shared a second aspect of the project's original inspiration, *Uridium*; bonus levels that would connect the main stages. "Andrew Hewson was trying to make me think of bonus levels. I just thought of a scrolling seabed. I can't remember when it came about. I think we were trying to figure out how to start the game, because you've got a submarine. The submarine comes up and the lid draws back and Pogo jumps out. I think the submarine



DEVELOPER HIGHLIGHTS

IMPOSSABALL
SYSTEM: ZX SPECTRUM, AMSTRAD CPC
YEAR: 1987

NEBULUS
SYSTEM: C64, VARIOUS
YEAR: 1987

ELIMINATOR
SYSTEM: ATARI ST, VARIOUS
YEAR: 1988



» [Atari 7800] Ghostly visuals aside, the Atari 7800 *Nebulus* – known as *Tower Toppler* – is an accurate conversion.

MECHANICAL MARVELS

More games that pushed technical boundaries



ANT ATTACK

■ Although far from the first 3D videogame, *Ant Attack* hosted one of gaming's earliest three-dimensional open worlds. Art school graduate Sandy White approached the creation of *Ant Attack*'s unique visuals as an exercise in sculpture and devised rescue-mission-themed gameplay to complement his game's immersive pixel-brick world.



I, ROBOT

■ Besides introducing filled polygons to videogaming, Atari legend Dave Theurer's cult classic also boasted a completely unique look. Viewed from an aerial third-person perspective, *I, Robot* challenges its iconic, geometric protagonist with trippy chess-like platforming, surreal mazes, intense shoot-'em-up sections and set-piece bosses.



» [Amstrad CPC] Although sluggish, Chris Woods' Amstrad *Nebulus* conversion perfectly replicates the original's gameplay.

> **"I realised that we had to tone down the game. We made it more linear"**
> John M Phillips

was in fairly early, and that probably just led to the underwater levels."

In-house playtesting followed, both by John and selected Hewson staff, but the real test of the game – now known as *Nebulus* – came later, when the title was previewed at an industry trade show. "I think there were only about three people that played it – it was Paul and Barry at Hewson, and me. That was it. We went to some trade show – one of the early PCW shows – and we had *Nebulus* on the stand. Everyone was transfixed by it, but realised as soon as they tried it that they couldn't play it. I think it was the fact that they hadn't seen anything like it before. After that, I realised that we had to tone down the game. We made it more linear."

After some adjustments to *Nebulus*' difficulty curve had been made, Hewson went on to publish John's game in time for Christmas and to send it for review, where the highly-original C64 platformer was met with critical acclaim. John's Spectrum conversion was equally well received, although its limitations frustrated the designer. "I remember it reviewed very well in the Newsfield magazines," John notes. "The C64 game had one of the highest marks they had ever given. I spent about a month on the Spectrum version; I was disappointed because there was no way of getting more colour."

In addition to the Spectrum *Nebulus*, John subsequently coded highly-rated 16-bit versions in very short order, although this had not been the designer's original intension. "I did the ST and Amiga versions, but Hewson had originally contracted a porting house based in Leeds. They were doing it for about six months, and I remember we went up to see them, and it was obvious to me that they didn't have a clue what they were doing. At the time, I was doing *Eliminator* on the ST, but I was so angry that I decided to convert *Nebulus* myself. I think I converted it in two months. Because I'd done *Eliminator*, I had all the tools. And I still had the maps from the original game."

A number of conversions to other systems were also produced – although *Nebulus* was renamed *Tower Toppler*, *Castelian* and *Kyorochan Land* for the US and Japanese markets, which is something that John has since come to terms with. "I think I helped out with the Amstrad version and the PC version," John recalls. "I can't remember much about the Archimedes version. The Nintendo versions were done by BITS Studios in London. I remember talking to them about a year later. Hewson got an advance from Nintendo – none of which had been passed on to me. The American versions were called *Tower Toppler* because of the publisher Triffix. The Japanese versions were changed to *Castelian* because Nintendo didn't like the name *Nebulus*. It probably bothered me at the time, but I couldn't care less now!"

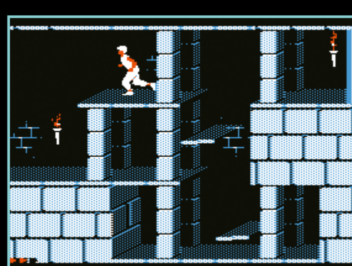
As for his current feelings towards his C64 original, John is philosophical about the limitations imposed by *Nebulus*' host hardware and humble about a classic that was largely down to his singular vision. "It's difficult looking back at old games, because so many things have come since. In terms of the size of the game, it's all you could do. I think I was just lucky; it was a case of happy accidents, really. It was just designing a game without thinking, and the fact that it was designed by one person who did the programming and also the art." *

Many thanks to John for revisiting *Nebulus*.



XYBOTS

■ Intended by developer Ed Logg as a 3D reimagining of his classic coin-op *Gauntlet*, *Xybots* was instead repurposed as a sci-fi shooter. Ed's game is rendered with sprites rather than polygons and rotation is limited to 90-degree turns, despite those limitations *Xybots* still helped to lay the foundations for the deluge of first-person shooters that followed.



PRINCE OF PERSIA

■ Quite how Jordan Mechner coaxed an Apple II into depicting realistic animation is anyone's guess, but even today, *Prince Of Persia*'s visuals are disconcertingly lifelike. The acclaimed developer's technique involved tracing frames of old movies – and film of his own brother running and jumping – and then adapting these tracings into sprites.



JUMPING FLASH!

■ An early polygon platformer, although *Jumping Flash*'s real innovation lies in its protagonist's mile-high jumps. The novelty of Robbit's aerial stunts is that while leaping he changes his viewpoint to look downwards instead of forwards, which allows him to target foes to long-distance stomp or blast – while additionally inducing giddy euphoria in the player.



VIB-RIBBON

■ Typically highlighted for its musical (rather than graphical) attributes, NanaOn-Sha's cult rhythm game is easily as visually novel as it is aurally inventive. *Vib-Ribbon*'s surreal graphics are best described as animated line drawings that are gently panned around as the player tries to overcome obstacles which are determined by their chosen soundtrack.

Chuckie Egg 2

HENHOUSE HARRY'S SHAMEFUL SECRET



» ZX SPECTRUM » 1985
» A&F SOFTWARE

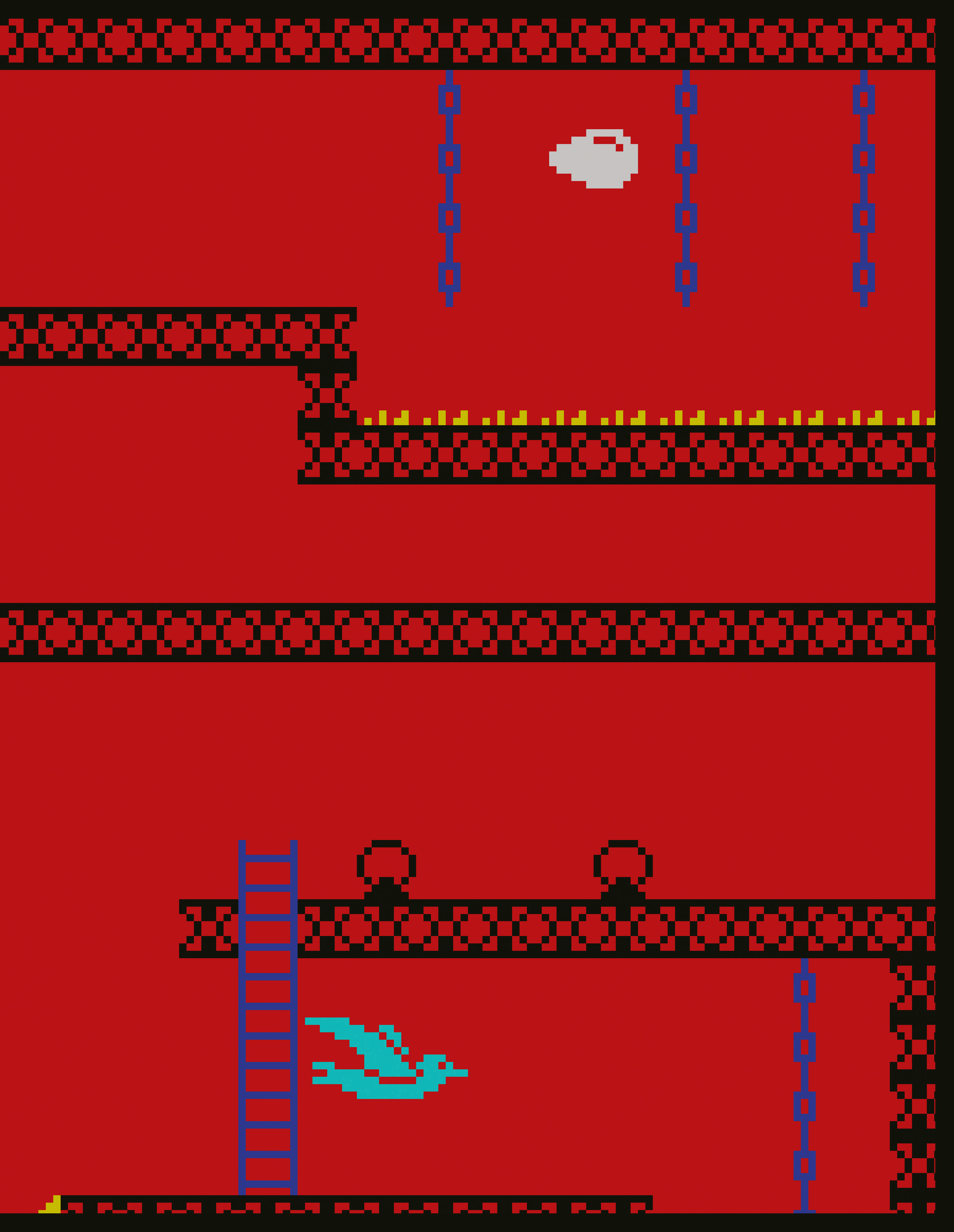
Some games stand the test of time brilliantly, being as much fun today as they were on their original release. Sadly, *Chuckie Egg II* is no such game.

Released two years after Nigel Alderton's critically-lauded original, it frustratingly features none of the style or panache that made *Chuckie Egg* so enjoyable. The original *Chuckie Egg* had its roots in the games that Nigel used to play in his local arcade, but this non-Nigel sequel is a very different beast, riffing off the likes of *Jet Set Willy* instead and adding some undercooked adventure elements for good measure.

Of course, if you're going to copy an 8-bit home computer platformer then *Jet Set Willy* isn't a bad place to start, but virtually everything found in Matthew Smith's gargantuan platformer is notably absent here. Yes there are sparse environments to negotiate, items to collect and objects and surreal looking enemies for Henhouse Harry to avoid, but that's where the similarities end.

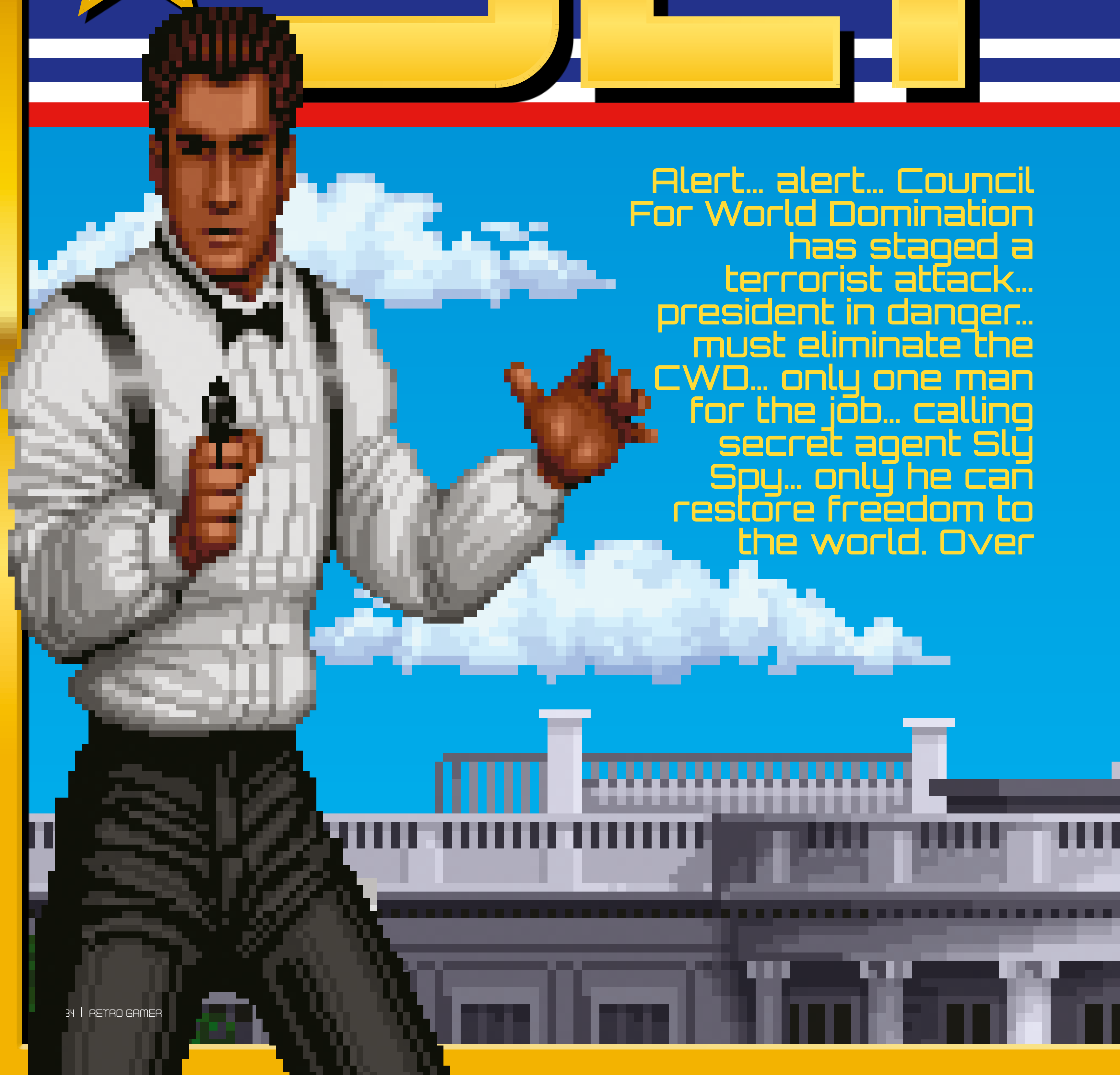
Chuckie Egg II is a constant exercise in frustration whether it's not being able to simply drop off ladders, which are often suspended in mid air, or immediately dying because you've instantly walked off a ledge on the next screen without realising it. The level design throughout is poor, with items seemingly placed with no real thought, while it's all too easy to miss objects that are then tricky to collect later on in the game. To put *Chuckie Egg II*'s weak performance in better context, *Super Mario Bros.* was released the exact same year and features a level of polish and playability that is notably absent in A&F Software's disappointing sequel.

In fact, the only good thing that's come out of playing *Chuckie Egg II* is that I've found it such a disappointing experience that it has inspired me to look at more poor sequels in far more depth going forward. Needless to say, you can expect a big feature in an upcoming issue. *



SLY

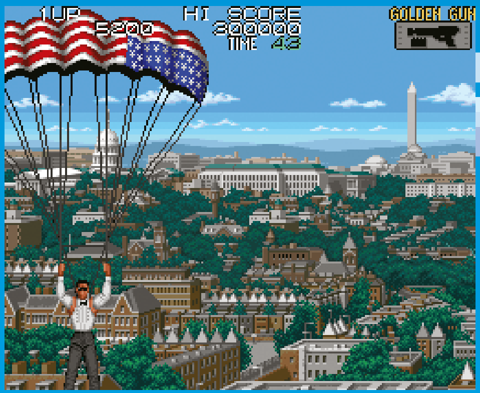
Alert… alert… Council For World Domination has staged a terrorist attack… president in danger… must eliminate the CWD… only one man for the job… calling secret agent Sly Spy… only he can restore freedom to the world. Over



SPY★

The history of videogames is littered with examples of the brazen appropriation of cinematic sources. From *Half-Life 2*'s antlions to *Dead Rising*'s *Dawn Of The Dead*-style setting via the multitude of games motivated by *Star Wars*, it has always proven an easy score to base a videogame's themes on a hit movie. Yet there can surely be very few games more derivative than Data East's *Sly Spy* – known as *Secret Agent* in Japan – a coin-op release that riffed on not just one film, but a whole series of films. Released in arcades in 1989, *Sly Spy* draws on over 20 years of *James Bond* movies as its inspiration, but is comprehensively the better for it. Playing the titular undercover agent, the game's attract mode reveals the president of the United States and his first lady waving insouciantly from their limousine in Washington DC. Jet pack-clad terrorists are soon swarming over the scene, firing indiscriminately into the crowd around the president, or at least we assume so; the screen turns crimson and it's over to you to save the world. Or, rather, the United States.

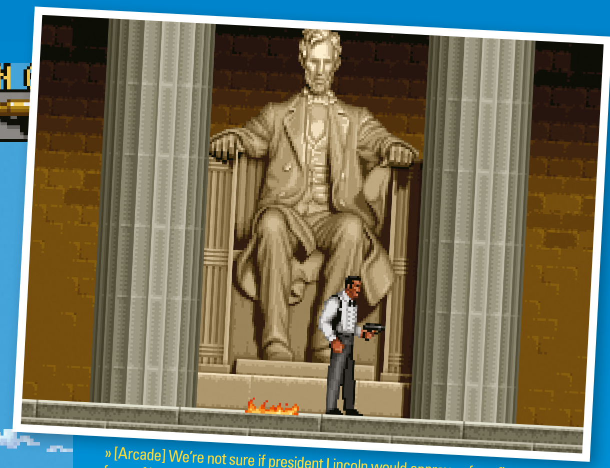
After an introduction screen in which the player selects their three-digit code (and, yes, you can choose 007, and no, it has no impact whatsoever on the game), it's time to take on the scourge that is the Council For World Domination, and parachute into the city. This first part of the game sees Sly descending the skies above Washington, fending off CWD agents who are trying to grab or shoot him. After a short battle, Sly's rather unsubtle stars-and-stripes parachute is ▶



» [Arcade] A nod to the movies, in this instance it is *For Your Eyes Only* and Bond's Union Jack parachute.



» [Arcade] Cargo vessel the Kukuchi Queen 2 proves a hazardous location for Sly.



» [Arcade] We're not sure if president Lincoln would approve of gunfire in front of his iconic statue.

> "Lots of things had to be sacrificed in order to hit deadline"
> Dean Belfield

unfurled, and he continues on foot; here the game becomes a run-and-gunner, in the mould of Namco's *Rolling Thunder*, and this style accounts for much of the rest of the mission. Sly is pursued by enemies from all around, although luckily, just like in the movies, his pistol holds a remarkable amount of ammunition. Chasing down the bad guys leads him through to the harbour (and onto a cargo ship named after the game's designer, Makoto Kukuchi), and the first of two underwater sections where the spy dodges mines, sharks and more henchmen. After several more levels, including a warehouse and underground lair, it's down to the final confrontation with the CWD's cigar-chomping leader, and a devious spike trap, redolent of many a *James Bond* flick. Actually, it's not that devious (see the Boss Rush boxout).

Along the way Sly gets to rescue a glamorous 'Bond Girl' (who conveniently knows the location of the CWD's hidden base), ride a motorcycle and traverse a zip wire. To help him despatch the vast array of henchmen, there are occasional abandoned machine guns, cans of fizzy drink to renew his health, and clocks that extend each level's time limit. Dotted throughout each section there are also small 'G' emblems, parts of a golden gun that are dropped by vanquished enemies. Pick enough of these up and Sly's firearm enhancement is charged, a powerful laser weapon that can despatch several enemies at once, although it unfortunately only lasts a limited time. In keeping with *Sly Spy*'s derivative nature, the gun and its laser fire are highly reminiscent of Robocop's cobra gun upgrade in the Data East game of the same name.

Perhaps reflective of its famous influence, *Sly Spy* is very much a game of its time. Each

BOSS RUSH



CAR GOONS

■ This is the first boss, and it's really just two different henchmen inside a black sedan car. Their gunfire/missiles can be easily dodged, and it's just a question of popping the odd shot away until the car explodes. Laughably simple.



DEFINITELY NOT JAWS

■ It's 'Jaws'! With some metal arms! This brute jumps around the screen, and in an impressive move, can send Sly's pistol spinning out of his hands. Fortunately he's even easier to despatch using a simple kick in the midriff.



EVIL SHARK

■ In the conclusion to the first underwater stage, a deep-sea diver has a couple of pops before retreating and letting an imposing shark take over. It's a patience game; wait, dodge, shoot until done. Again, not very challenging.



TIGER TWINS

■ Finally, a boss worth talking about! Sly encounters a hologram of the CWD leader who unleashes a pair of big cats. They leap at Sly, requiring him to dodge in order to avoid their fangs. Use the platforms for a quick escape.



» Three distinct pieces of art: the American flyer, the Japanese art and the James Bond-inspired cover for the home releases.

PORTING SLY SPY

We speak to Software Creations' Dean Belfield, the man behind the Amstrad and Spectrum home conversions of Sly Spy



How did you get involved with *Sly Spy*?

I was originally employed by Software Creations to develop Amstrad CPC games, despite being a Spectrum programmer up until that point. I'd already been with the company a couple of years and worked alongside Mike Follin, and between us we covered development on Z80-based machines. After Mike had moved over to developing on the Game Boy, I was asked to develop both the Amstrad and Spectrum versions of *Sly Spy*.

Were you familiar with the arcade game?

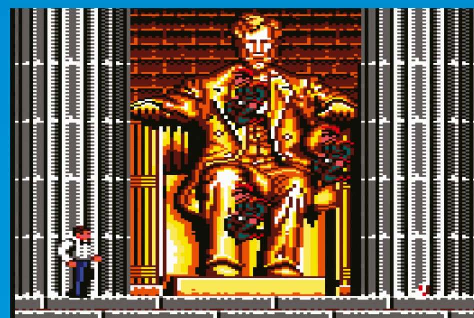
I'd never heard of it!

Arcade games in the late Eighties were mainly colourful, varied and fast-paced. Were you concerned how you'd squeeze it into the Spectrum in particular?

Just a little! Mike had already done similar conversions – his method was efficient, from a development point of view, but you ended up with a monochrome game on both versions, the Amstrad one being slightly more sluggish. The usual method was to get an arcade board in, play it for hours on and then develop from experience and memory. Thankfully the arcade version of *Sly Spy* wasn't terribly taxing, nowhere near as bad as *Ghouls 'N Ghosts* which took Mike and I ages to complete!

What was the biggest single issue you had?

Time, time was my enemy. I made the decision to write a unique version of the game for the Amstrad and Spectrum, rather than a port. Lots of things had to be sacrificed in order to hit the deadline – like smooth scrolling, my social life and sanity. Most of the Spectrum development was done in my flat in the evenings. One night, as I was coding the first level, I tuned in to the news and it was announced the Berlin Wall was being torn down. Given the magnitude of the event, I thought it appropriate to turn the Spectrum off, grab a beer and watch the historic event unfold.



How satisfied were you with the final game?

It wasn't bad, yet I wish I'd had more time to implement smooth scrolling on the platform sections. It was the penultimate game I worked on for the Spectrum – it was followed by *Gauntlet 3D* – as I followed Mike Follin's footsteps, and moved into Game Boy development as he moved onto the SNES.

Our thanks to Dean for his time.



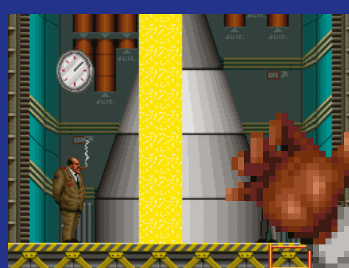
ODDJOB IMPOSTER

■ While he may look more alike to Data East's Karnov than Goldfinger's henchman, this boss is clearly modelled on Oddjob. Like the diver boss, Sly needs to stand just outside his range and take a shot just before the hat returns to its owner.



DEEP-SEA DIVER

■ The heavy-suited diver from earlier makes his move to destroy our hero, and it's pathetic. Using a rapidly-extending arm, he reaches out to grab Sly, who can cunningly stand beyond its reach and take shots at his leisure.

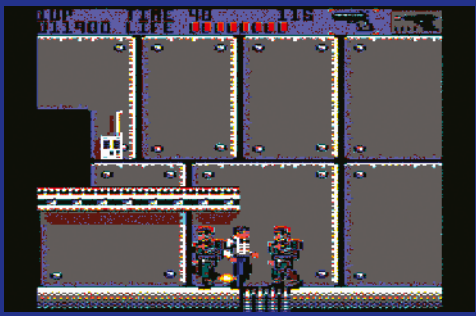


CWD COMMANDER

■ The fat git in charge of the CWD is a cinch to off. Gloating at Sly behind a laser wall, a very *Bond*-esque spear trap descends from the ceiling. Pummel that wall with your pistol or kick and it's one hit to kill the final villain. *One hit!*



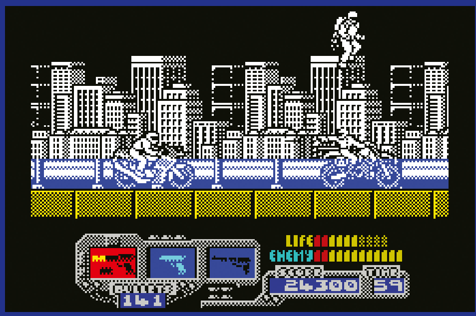
CONVERSION CAPERS



AMSTRAD CPC *Sly Spy* is a mixed bag on the Amstrad. The graphics are great and convey the look of the arcade original, however the total absence of sound (save a bit of a ditty on loading, with expanded memory) is a mystery. It plays well, but the gameplay is hampered by some slightly iffy collision detection.



COMMODORE 64 Can we just say that we *really* likes the way the wind ruffles Sly's trousers in the opening scene? But that's not all we like: C64 *Sly Spy* is for sure the best of the 8-bit versions, with some excellent music courtesy of Geoff Follin, smooth parallax scrolling and fast, brutal gameplay.



ZX SPECTRUM Its limited power meant accuracy was out of the window. Yet Dean Belfield and the Software Creations team did a decent job, and it impresses with the rising city in the sky dive section. Sly's slow bullets actually make most of the bosses much harder – not such a bad thing.

THE SPY WHO MOCKED ME

In addition to its lead character and various boss enemies, Sly Spy contains many other nods to the James Bond canon



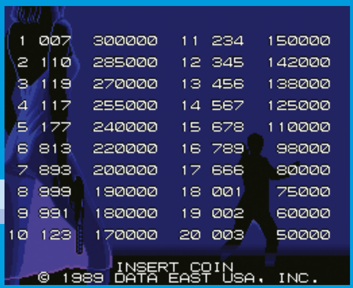
LICENCE TO LAUNCH

■ Towards the end of 1979's *Moonraker*, Bond and Dr Goodhead are trapped underneath the impending launch of one of Drax's Space Shuttles. Thanks to one of Bond's handy gadgets, the pair escape, but not before giving *Sly Spy*'s creators the inspiration for this scene.



JET PACK JOYRIDE

■ Many of Sly's adversaries sport a nifty jet pack, which they occasionally drop for him to use himself, just like the far-fetched gadget that featured in 1965's *Thunderball*. Weirdly, Bond could easily fit his gigantic jet pack into the tiny boot of his Aston Martin.



A FAMILIAR POSE

■ Much of *Sly Spy*'s imagery is drawn from *The Living Daylights*, understandable given it was the most recent Bond movie at the time. This is perfectly displayed in the game's high score table which is a blatant copy of the Timothy Dalton movie poster.



PEDAL TO THE METAL

■ While *Moonraker*'s ridiculous underwater Lotus, 'Wet Nellie', is the Roger Moore Bond car everybody remembers, the sleek red lines of the Lotus Esprit Turbo from *For Your Eyes Only* (1981) – this is undoubtedly the one which inspired *Sly Spy*'s designers here.



FALLING WITH STYLE

■ 1979's *Moonraker* features a daring parachuteless skydive by Bond, with Jaws for company. *The Living Daylights* also features a battle in the air between Bond and another villain, Necros, and both scenes helped ensure the inclusion of such a section in *Sly Spy*.



SCUBA SKILLS

■ The marine-based *Thunderball* contains a climactic underwater battle between SPECTRE and United States Coast Guard frogmen. Several of the evil organisation's henchmen use underwater scooters to propel themselves along, and Sly can pick up one of these machines too.



DROPPING IN

■ In *You Only Live Twice*, Japanese Secret Service Ninjas rappel down into Blofeld's ostentatious volcano base. An early level in *Sly Spy* replaces the good guys with villains, roping down and attacking Sly, surely informed by this famous scene.

> "The game has become something of a holy grail for many collectors"



AMIGA An amazing soundtrack by Geoff Follin, and serviceable graphics aside, this is a disappointing port to the 16-bit computer. Lethargic movement, dodgy collision detection and a cramped gameplay area conspire to make this a missed opportunity, and less fun than its Commodore 64 cousin.



ATARI ST In terms of graphics, probably the best home port of *Sly Spy*. Musically it's not up to the Amiga, but the sound effects are passable. In terms of gameplay, this version fails to replicate the pace of the original, but does an adequate job, just edging out the Amiga version for 16-bit supremacy.



level is brief, but action-packed, and it never lets you forget its roots. The plot jigs along at a fair lick, and is also nonsensical, a paper-thin connection between each random level – effectively serving merely as an excuse to put Sly on a motorbike, then in a Ferrari and so on. The underwater levels are a welcome deviation and not as frustrating as you might expect thanks to a lack of any real influence from being several metres under the sea – Sly moves just as deftly as he does above ground. The game is also not likely to appeal to animal lovers: aside from shooting endangered species such as the beautiful tigers that attack Sly sporadically, our valiant spy also vanquishes Doberman dogs (who give out a disturbing, if accurate, yelp when shot) and sleek, graceful sharks. In a particularly grim move, the boss shark from level four can even be excessively speared several times after its death, chunks of flesh and vast crimson wounds puncturing its lifeless body. As to Sly himself, like James Bond, he is also the most ridiculous of 'secret' agents. Everyone knows who he is, he drives around in a bright red sports car and his idea of blending in sartorially is to wear a tuxedo. Subtlety is in short supply in *Sly Spy*.



» [Arcade] What's a spy story without a submarine docked in the villains secret lair?

In terms of gameplay, *Sly Spy* also remains an oddity to this day. Many parts of the game are extremely lazy and repetitive, such as the monotonous boss duplication at the end of the final level. Although this is admittedly common in arcade games, the break in tradition for *Sly Spy*'s early sections (the introductory sky dive, variation of motorcycle and running/swimming levels) makes it disappointing nonetheless. Despite this, there's no doubt the game is entertaining, has plenty of action and some impressive graphics and, as a result, home conversions were inevitable. Coming in at the tail end of the 8-bit era, Ocean Software published the five home ports of *Sly Spy*, retitled to an amalgamation of its western and eastern names. Development of *Sly Spy: Secret Agent* was outsourced to Software Creations, which did an admirable job with the game on the Commodore 64, Amstrad and ZX Spectrum home computers, albeit with lengthy and annoying multi-loaders. The Amiga and Atari ST versions, developed concurrently, were better-looking thanks to the graphics being read directly from the arcade ROMs, although they failed to improve significantly on the gameplay of the 8-bit versions. Moreover, thanks to its late release on the 8-bit computers, the game has become something of a holy grail for many collectors, on the ZX Spectrum in particular, as reported in **Retro Gamer** back in issue 95's collectors guide to the Sinclair computer. An eBay auction from around 12 months ago saw a copy of the original Spectrum release go for an eye-watering £227.

Curio or not, *James Bond* fan or not, it's impossible not to be charmed by Data East's spy run-and-gunner. Gleefully at odds with today's more sensitive and politically correct Bond, *Sly Spy* isn't afraid to get his hands dirty and do what has to be done. Great job! ★



» [Arcade] One thing about Data East's game is that it's nice and varied, ensuring you're always doing something different.

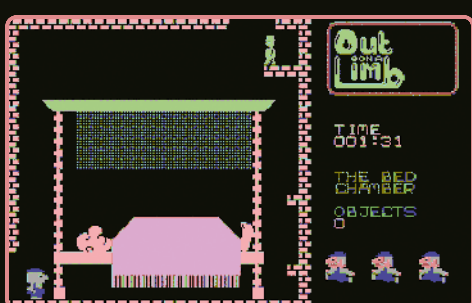
Out On A Limb

Sam Manthorpe was 15 when he coded the fairytale-themed Out On A Limb for Commodore machines. Paul Drury exchanges some magic beans to hear his tale

All games are products of their time. Just like any creative endeavour, they reflect the tastes and cultural influences of the day. So if we told you *Out On A Limb* was a platform game, featuring a chubby protagonist dressed in cap and overalls who must leap through a series of bizarre, interconnected screens, populated by deadly roast turkeys and giant teddy bears, you know we're back in the Eighties.

"Yes, I used to play *Donkey Kong* in my local chip shop in Bromley, South East London," acknowledges *Out On a Limb*'s author Sam Manthorpe, "so *Mario* was definitely an influence. *Jet Set Willy* was a big influence, too. I was never a Spectrum owner but when it came out on the C64 I spent many an hour playing it."

Some of the inhabitants of the 23 rooms which make up Sam's game world seem to have moved directly from Matthew Smith's mansion. You'll spot Willy



» [C16] It looks like Miner Willy is making a guest appearance, hanging out in the master bedroom.



IN THE KNOW

- » **PUBLISHER:** ANIROG SOFTWARE
- » **DEVELOPER:** SAM MANTHORPE
- » **RELEASED:** 1984
- » **PLATFORM:** COMMODORE 16
- » **GENRE:** PLATFORMER

himself in a jaunty top hat together with long-legged insects, assorted angry birds, flying knives and various household items possessed with evil intent. "A lot of my friends and siblings came up with ideas," laughs Sam. "I can assure you no drugs were involved."

There is an overall theme to the game – as Jack, you must scale a beanstalk and steal a golden egg, magic harp and sack of gold from the giant's castle – but Sam and his schoolmates let their teenage imaginations embellish the fairytale with manic pot plants, huge cups of tea and automated vacuum cleaners that would make James Dyson proud. It may have been a genre piece but it had enough of its own personality to make each new screen worth discovering and as an exclusive Commodore 16 title released in the same year as the machine, it provided early adopters with something uniquely theirs.

"I originally wrote it for the Commodore 64, actually," says Sam. "I didn't actually own one but my friends Charlie and Richard let me use theirs to write it on. I sent off a tape to Anirog Software and they liked it and asked me if I could do a C16 version of it. The Commodore 16 had just come out and they thought it was going to be really big."

We can laugh at that now but back in 1984, it wasn't clear which micros would triumph and which would end up in the bargain bin of history. Anirog kept back the release of the C64 version until the following year and instead sent him a C16. Both Commodore computers were based around the

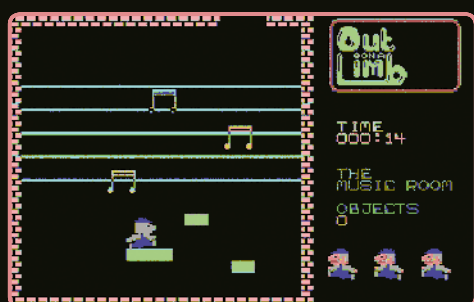
same processor so Sam didn't have to make too many coding alterations apart from reducing the colour palette, but he did have to lose a handful of rooms and split the game into three separately loaded segments to fit into the C16's smaller memory.

"Erm,I didn't actually realise you had to load it like that until you just told me," says a slightly-bemused Sam. "Anirog also gave me a disk drive so I stored everything on that and never had to load it from tape! Somebody else must have written the multi-load…"

Loading the game in chunks allowed the original dimensions of the castle and its surroundings to remain broadly intact and determined players could look forward to some ingeniously crafted sections. Leaping between the dangling braids of Rapunzel's hair, as she fires lightning bolts from her bony fingers, and braving The Tunnel, which requires patience, practice and incredibly precise jumps, are impressively-designed challenges. The truth is, though, that the average player may give up before they've even climbed the beanstalk on the opening screen, such is the brutal difficulty.

"I've since read how hard it was but I didn't realise it at the time," says Sam, nonchalantly. "My friends and I did all the testing ourselves and we all completed it but yes, in retrospect, I should have made it much easier."

The friends in question all get a credit on the penultimate screen and they deserve considerable kudos for somehow making it through the perilous castle and grabbing the final treasure in Sam's Room, patrolled by a sinister looking knight in armour. "It was my first game, I was 15 years old and I was just chuffed it had been published at all," smiles Sam. "I don't think it sold very well. I know *Zzap!64* gave it a bad review, which was fair enough, really, but I made a few thousand pounds from both versions."



» [C16] If you squint really hard, the main character kind of looks like a certain Italian plumber.

Whilst nobody is claiming *Out On A Limb* is a lost gem, it is a sweet reminder of a bygone age, when enthusiastic schoolboys could scribble graphics in the back of their maths books before rushing home to tap in the hex code, dreaming of making it rich. The pixel-perfect jumps, weird creatures and quirky humour epitomise the era of the British bedroom coder and if you were a C16 owner in 1984, this was one of the few games you could call your own. Sam went on to produce *Atlantis* for the machine the following year and also produced *The Detective Game* and *Hyper Blob* for the C64, the latter an intriguing proto-*Lemmings* affair, before heading off to university and leaving game design behind.

"I ended up doing a PhD in Computer Science in Switzerland," says Sam, "and I'm a software engineer for Google now. It was really nice being able to make those games back in the Eighties, doing your own thing and not have anyone telling you what to do!"

Those were indeed the days… *

SAM'S ROOMS

Coder Sam Manthorpe picks his three favourite screens



THE BEANSHOOT

■ Jack's challenge begins at the foot of the giant plant. "The first screen was a breakthrough for me," says Sam. "This was the first proper game I'd written and I did the screens pretty much in order so once I got this working I thought, 'Cool, now I can just do more levels!'"



AUSTRALIA

■ The second section of the game opens with this odd trip down under, requiring careful cloud-hopping. "I really like this one. It's special because it required some customised code to do this level so the kangaroo, for example, jumps upside down."



RAPUNZEL

■ If you successfully scale the castle's tower, avoiding a hail of lightning bolts en route, you are greeted with a gurning Rapunzel who appears to have cut herself shaving. "It wasn't my idea but I like the way you jump up her hair and no, she wasn't modelled on anyone!"



the fall of imagine



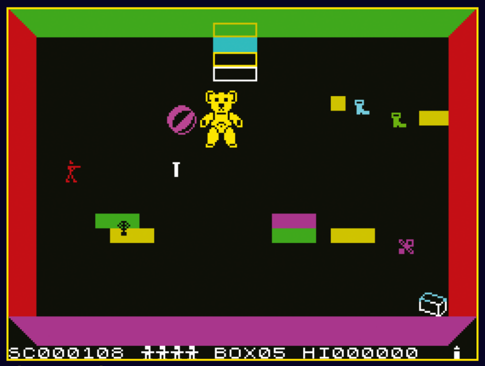
Imagine went from boom to bust during a manic 18-month period, collapsing amid accusations of financial mismanagement. Martyn Carroll charts the short and sensational history of the Liverpool firm and uncovers the legacy it left behind

Imagine Software's final print advertisement was unbelievable. The firm was famous for its promotional activity, with its wares advertised heavily in the gaming press. But this was no full-colour, full-page ad in a prominent position. Instead it was a black-and-white quarter-page ad tucked away at the back of the December 1984 issue of *Your Computer* magazine. The reason for this switch was simple: the ad was placed by CJ Chambers Esq., the appointed liquidator of Imagine, and it was to announce an upcoming auction of the firm's assets. Various lots were listed, ranging from executive office furniture to expensive computers from the likes of Sage and Apple. In fact there were *15* state-of-the-art Sage computers up for grabs which had been used by Imagine's programmers to develop well-known games such as *Alchemist*, *Stonkers* and *Zzoom*.

It was an extraordinary ad marking the extraordinary end to an extraordinary outfit. Just how did Imagine go from being the biggest software house in the UK in 1983, reportedly turning over £1 million a month and rubbing shoulders with the likes of IBM and Apple, to crashing out of business in 1984 with a line of creditors as long as a source code listing? Where do we even start? Well how about with those bloody expensive Sage computers?



» [ZX Spectrum] The boasts began early on, with claims that David knocked out *Arcadia* in an afternoon.



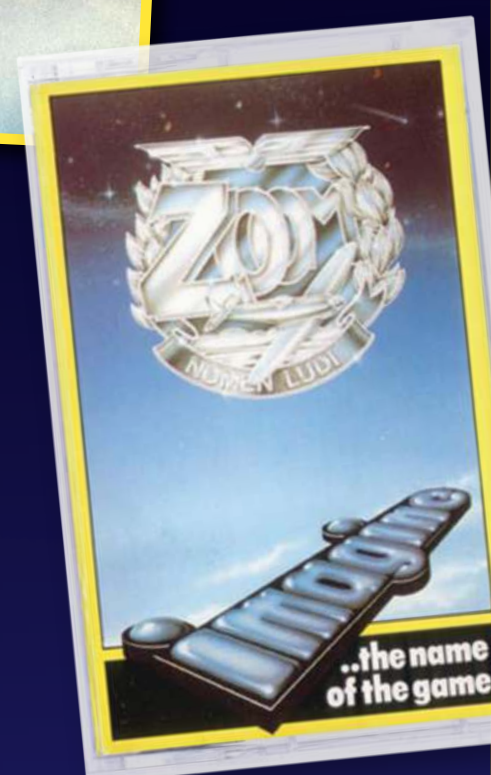
» [ZX Spectrum] *Ah Diddums* was an early misfire for Imagine. It was inventive but poorly implemented.

The story behind the Sages is a good one. When they formed Imagine in late 1982, software developer David Lawson and sales manager Mark Butler, both aged 23, appeared to have clear plans and ambitions for the new company. They knew that they didn't want to mimic their former employee, fellow Liverpool-based developer Bug-Byte, which was in the business of creating clones of arcade games for home computers (David himself had written faithful versions of *Space Invaders* and *Pac-Man* for Bug-Byte). According to John Gibson, one of the first programmers to join the firm, this was because the big arcade companies had begun to exercise their legal options regarding rip-offs. What Imagine wanted dropping through the letterbox during its fledgling months was mail orders from gamers, not cease and desist orders from Atari and Namco.

As such, the firm looked to develop fresh game experiences for what were then the UK's two most

software





popular home computers, the Sinclair ZX Spectrum and Commodore VIC-20. Its first game, the fast-paced shooter *Arcadia* which was developed by David, was far from original but it was generic enough to avoid comparison to specific coin-ops and proficient enough to garner good reviews and strong sales. Mark was reported as saying that 75 per cent of *all* Spectrum owners purchased a copy of *Arcadia*. We would soon learn that Imagine liked to bang its drum loudly and often, so that figure was certainly an exaggeration, but it's true to say that *Arcadia* provided a foundation on which the firm could build.

The problem David quickly found was that original ideas didn't necessary make great games. His next two efforts, the space garbage-gathering *Schizoids* and teddy bear caper *Ah Diddums*, were novel but played poorly. John's toothbrush-'em-up *Molar Maul* was better but no classic. John reveals that Imagine looked to Ultimate, the one company that was able to bang out brilliant, original games in short time and with seemingly little effort. Determined to work out what strange magic was being practised in Ashby-de-la-Zouch, Imagine employed a private detective to sniff out Ultimate's secrets. In the end the only fact gleaned was that Ultimate used a Sage system to develop its games. You can probably guess what happened next. "I arrived in the office one morning and found a Sage IV sitting on my desk," laughs John. "The joy of it!"

We now know that the staff at Ultimate had a grounding in coin-op game development and that was key to its success. Still, Imagine's growing number of programmers were pleased with their lavish new kit which no doubt aided the development process, if only due to the built-in hard drive. John put his to good use to create two of the firm's best known Spectrum titles, the 3D shooter *Zzoom* and the ambitious war game *Stonkers*. He has fond memories of this time and confirms the oft-quoted story that David Lawson demanded that programmers be left alone to do their thing. "I remember that being the case," he says. "It was the early days of the games industry and producing a game was very much an ad hoc affair. No design documents, no milestones, just go away and come



timeline

DEC 1982 Having only formed weeks earlier, Imagine releases its first game, *Arcadia*, in time for Christmas. Retailing at £5.50, it's a huge hit on both ZX Spectrum and VIC-20.

JAN 1983 **Two more games are released: *Schizoids* for the Spectrum, and *Wacky Waiters* for the VIC-20.**

MAR 1983 The releases continue with *Ah Diddums* and *Catcha Snatcha*. The firm is profiled in *Home Computer Weekly*, revealing that the projected turnover for the first 12 months is £2.6m.

APR 1983 **John Gibson's first game, *Molar Maul*, is released, along with *Frantic* on the VIC-20.**

JUN 1983 The next Imagine title lands: *Zzoom* from John Gibson. It's Imagine's first game for the expanded Spectrum 48K.

JUL 1983 ***Jumping Jack* is released for the Spectrum. This title was submitted to Imagine on spec, having been developed at home by father-and-son team Albert and Stuart Ball.**

AUG 1983 *Zip-Zap*, the debut game from Ian Weatherburn, is released. A Commodore 64 version of *Arcadia* (converted by Eugene Evans) is made available.

SEP 1983 **Imagine moves to new offices on Sir Thomas Street and Tithebarn Street in the heart of Liverpool. *Bewitched* for the VIC-20 is released.**

OCT 1983 Imagine looks to hire 30 new programmers, in anticipation of the Marshall Cavendish deal to produce multiple games for the publisher.

NOV 1983 ***Stonkers* is released for the Spectrum. Versions of *Jumping Jack* are released for the Atari 8-bit and Dragon 32 under the title *Leggit*.**

DEC 1983 *Alchemist* is released in time for Christmas. The first cracks appear as the Imagine-owned Studio Sting is liquidated. Imagine books out one of the largest tape duplicators to thwart other publishers, but the ploy backfires as it's left with a warehouse full of old games it struggles to sell.

JAN 1984 **Ads for *Bandersnatch* and *Psyclapse* begin to appear in the press. It's suggested that *Bandersnatch* will be available "around May".**

MAR 1984 The Marshall Cavendish contract is terminated and Imagine agrees to pay back the cash advance.

APR 1984 ***Pedro*, one of the games intended for Marshall Cavendish, is released. A 'winding-up' order is brought by Cornhill Publications.**

MAY 1984 *Cosmic Cruiser* is released. The firm's back catalogue of games is sold to Beau Jolly.

JUN 1984 **Staff are laid off and the Sir Thomas Street offices are vacated. *Crash* speaks to Bruce Everiss who says the company "is up shit street".**

JUL 1984 Bruce resigns at the start of the month. A week later publisher VNU is granted a petition to have the firm wound up. Imagine is declared bankrupt.

SEP 1984 **Ocean purchases the Imagine name from the liquidators. *BC Bill*, Imagine's final game, is released by Beau Jolly.**

back when you've finished it. Having said that, Dave was very much involved in the design of *Zzoom* and *Stonkers*, in so far as he said 'I want you to write a game that does this'. In other words he chose the kind of game I had to write but the design was down to me."

Working alongside John was 16-year-old programmer Eugene Evans, another former Bug-Byte employee. "I was an engineer for almost the whole time at Imagine," he says. "I was the first full-time employee of the company. I left Bug-Byte a few months after Dave and Mark." Eugene was responsible for two popular VIC-20 titles, platformer *Wacky Waiters* and maze game *Catcha Snatcha*, but his programming work was overshadowed when he was thrust into the media spotlight. Reports in the computer press that the teenager was earning £17,000 a year at Imagine, and that with bonuses his salary might double, were picked up by national newspapers. *The Daily Star* memorably splashed with the headline "£35,000 *Whizz Kid*", describing how young Eugene had gone from "tea boy to teenage tycoon", referencing the fact that his first job had been as an assistant in a computer shop. Imagine made the most of the publicity, revealing that they had bought Eugene his own company car – a £6,000 Ford Escort XR3i – despite the fact he wasn't legally able to actually drive the thing.



» [Atari 8-bit] The Atari version of *Jumping Jack* featured a unique head-to-head mode where two players raced to the top of the screen.

> **"It was inevitable. Imagine's hype made the tabloid newspapers"**
> John Gibson

This PR was perfect, and planned. "Boy, did it help raise our profile," says Eugene, "which was the whole idea. However it quickly got out of hand as the story took on a life of its own. Despite some of the negative fallout I still get the occasional email from people who say they got into games because they were able to convince their parents it could be a real career!" John recalls that it was impossible not to get caught up in the hype at the time. "It was inevitable. Imagine's hype made the tabloid newspapers. One had a photo of Eugene and I draped across our cars. Another had the headline about Eugene earning £35,000 a year. He actually earned around a third of that. The hype even attracted the attention of local television and I was interviewed on a couple of occasions."

The man behind the hype was Bruce Everiss, a well-known character in the Liverpool software scene. He joined the company early on, initially as general manager where he was responsible for the day-to-day running of the business (but not financial matters which would become the responsibility of another director, Ian Hetherington). Bruce was fundamental in building the Imagine 'brand'. He recalls being told by David to take Imagine and "create a cult". Elaborating, he says: "I believe that David was thinking of the Beatles, which came from Liverpool. He understood that the games themselves were of little public interest so we had to create a bigger story. And we got the bigger story into a wide range of mainstream media and made several of our employees well known."

five defining games



ARCADIA
VARIOUS, 1982

Imagine set the bar high with its debut, this frantic shooter in which players blast waves upon waves of colourful aliens. The game was rarely out of the charts during 1983, providing the firm with its first (and only?) mega-seller. The version for the unexpanded VIC-20 is pictured here.



ZZOOM
ZX SPECTRUM, 1983

It may feature a control panel crammed with various displays and flashing lights, but this is no boring flight simulator. Instead it's a brilliantly fun shooter in which you have to save refugees (or shoot them, if you're in a mean mood). Rightly remembered as an early 8-bit classic.



» [ZX Spectrum] Imagine wanted original game ideas and they didn't come much more novel than the bacteria-busting *Molar Maul*.



Some companies tried to keep their star coders out of the spotlight, in case they were poached by competitors, but not Imagine. Later on the game inlays even included mini biographies of the programmers. "That was my idea and was part of marketing," says Bruce. "The public identifies most with other people, so with the bios you create an engagement that cannot be built any other way. We led the way in giving credit to creatives and really it is only morally right to do so. We never lost any talent. None. Why would anyone want to work elsewhere when they could be in the humming creative campus that was Imagine?"

The games also benefitted from fantastic cover illustrations drawn by Steve Blower, who headed up Studio Sting, an Imagine-owned creative house and advertising agency. The art, together with the distinctive yellow inlays with black spine text, allowed Imagine's games to stand out from less professional-looking products. A new startup in Manchester named Spectrum Games even copied the spine design (more on *that* company later). Around this time WH Smith, John Menzies and other UK retailers were starting to stock games in high street stores and Imagine's slick product line was ideally placed to catch the wave. The firm also worked to establish a nationwide network of independent dealers. At the beginning of 1983 all of Imagine's games were sold via mail order, but by July of that year the figure had fallen to 40 per cent, with the lion's share sold in shops. Demand was fuelled by relentless advertising in the specialist press (the April 1983 issue of *Your Computer* featured *seven* full-page ads booked by the firm).

Throughout its first year Imagine was seemingly unstoppable. Its software range quickly grew to more than a dozen titles and the number of platforms it supported increased to include Atari 8-bit, Dragon 32 and Commodore 64. At the beginning of 1983 the firm was projected to turnover £2.6 million by the end of the year. Mark would claim that the final figure was ▶





JUMPING JACK

VARIOUS, 1983

■ There was no Sage IV involved in the making of this classic. Albert Ball developed the game at home on a stock 16K Spectrum and enlisted his ten-year-old son Stuart to create the graphics. It was picked up by Imagine and is almost certainly the firm's finest game. You can read the Making Of in issue 146.



STONKERS

ZX SPECTRUM, 1983

■ Yes, it's plagued with bugs and these days it's little more than a Speccy meme, but let's not forget that this groundbreaking game is one of the earliest real-time strategy titles. In this respect *Stonkers* is probably the closest Imagine got to making good on its promise and made an actual 'mega game' – it just didn't know it at the time.



ALCHEMIST

ZX SPECTRUM, 1983

■ "Experience the visible adventure!" declared the ad for *Alchemist*. We have no idea what that actually means in actual human talk, but regardless this is a smart graphic adventure for the Spectrum, featuring a wizard who can transforms into an eagle. If only the scrolling was a little smoother.

the imagineers



David Lawson
CHAIRMAN/SOFTWARE DIRECTOR
■ By all accounts it was David who "made it all happen". He coded Imagine's early games and oversaw software development.



Mark Butler
SALES DIRECTOR
■ Mark cofounded the firm with David. His background was sales and he was instrumental ensuring the firm's first-year growth was big.



Ian Hetherington
FINANCIAL DIRECTOR
■ A codirector of Imagine, Ian had overall responsibility for financial control. He had close ties with David Lawson.

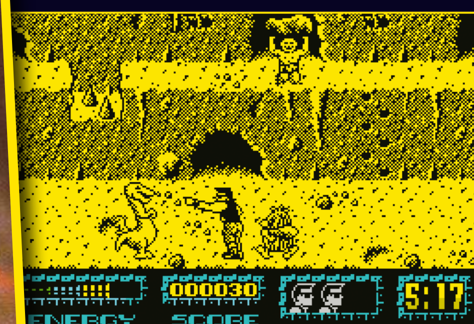


Bruce Everiss
OPERATIONS DIRECTOR
■ Joined initially as general manager, Bruce was eventually responsible for marketing and sales. He was Imagine's chief mouthpiece.

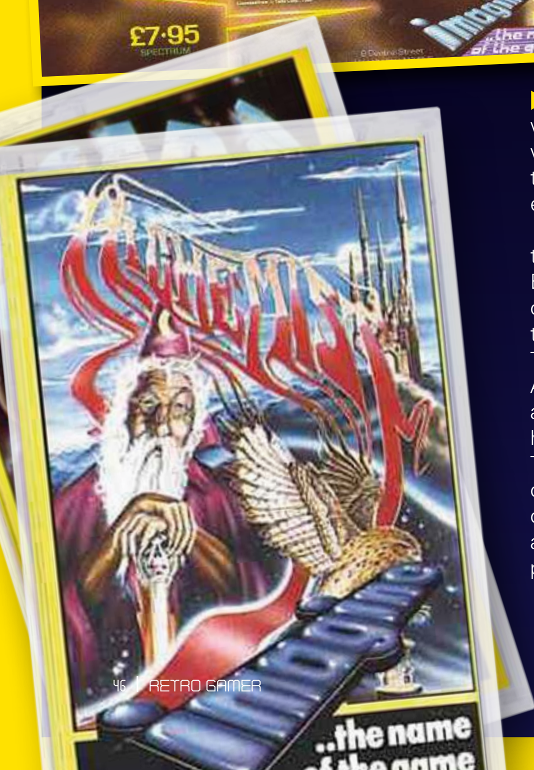


Steve Blower
CREATIVE MANAGER
■ The firm's in-house illustrator. Steve designed the Imagine logo and most of the artwork and advertising for the games the firm peddled.





» [ZX Spectrum] Ocean used the Imagine brand for several years. The last title to carry the name was 1989's *Renegade III*.



▶ actually £8 million and the only problem he faced was figuring out how to spend his share (motorcycles were his thing, it transpired). Boasts aside, it was clear that Imagine was very good at making money – and equally proficient at spending it.

A huge heap of cash went on rent. Imagine wanted to project a successful image so a business unit in Bootle was out of the question. It chose a smart office on Exchange Street East in Liverpool city centre, but they soon relocated to a four-story HQ on nearby Sir Thomas Street which was christened 'Imagine House'. Amazingly this was just for the sales, marketing and accounting staff, as the developers and creatives were housed in a separate base on Tithebarn Street. Tony Tyler, editor of *Big K* magazine, visited these luxurious, open-plan offices and was clearly gobsmacked. "Their offices are immense; the only possible word," he wrote at the time. "Seemingly hundreds of feet apart sit the programmers in teams of two, each with a neat desk, a Sage IV and a couple of monitors. Many of the offices have glass walls."

The space was excessive, but then Imagine was in the process of staffing up following a deal struck with Marshall Cavendish in late 1983. The publisher was launching a programming periodical called *Input* and to support the title it contracted Imagine to produce six original games across multiple formats in a deal that might be worth as much as £11m. This resulted in Imagine employing many additional developers to help fulfil the deal. In an early interview Mark promised that staff numbers would never exceed 25, as this would result in a "less efficient" business, yet the number of people on the payroll swelled to more than a 100. And some of these employees were well rewarded. "There was some genuine excess," says John. "Most notably the fleet of expensive cars. I was a humble programmer yet my company car was a Porsche. Expenses claims were over-the-top. I used to claim for petrol for private use and parking tickets. In the end, the Porsche cost me nothing. I remember there was a programmer who had a penchant for ice lollies. He'd eat three or four a day. He used to claim them on expenses."

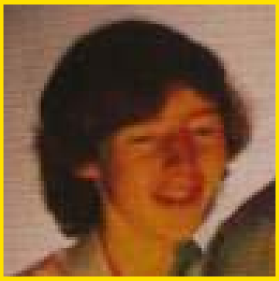
In the end it was the salaries, rents and rates that really drained Imagine's finances, not falsely-claimed frozen refreshments. To compound matters, the contract with Marshall Cavendish was terminated in February 1984 after the publisher rejected Imagine's



Eugene Evans
PROGRAMMER
■ Imagine's 16-year-old 'whizz kid'. He created several VIC-20 games and worked on the ill-fated C64 Megagame, *Psyclapse*.



John Gibson
PROGRAMMER
■ Nicknamed 'Grandad' due to his advanced age (he was only 34!). John Wrote *Zzoom* and *Stonkers*, and was a key member of team *Bandersnatch*.



Ian Weatherburn
PROGRAMMER
■ Created *Zip-Zip* and *Alchemist* for the Spectrum. One of the 'A Team', Ian was the 'face' of *Bandersnatch* along with John Gibson.



Sylvia Jones
SALES MANAGER
■ As seen in the *Commercial Breaks* documentary, she had the unenviable job of selling the Megagame concept to distributors.



Paul Finnegan
SALES MANAGER
■ Another employee who joined from Bug-Byte. He worked on the sales side but departed after six months to join Ocean Software.

"I was a humble programmer yet my company car was a Porsche"
John Gibson

initial offerings. Imagine quibbled over the terms of the deal but it agreed to pay back the £200,000 advance (in 12 monthly instalments). Despite the deal ending, the recent hires were kept on and Imagine would publish two of the games intended for Marshall Cavendish – *Pedro* and *Cosmic Cruiser*. These two lacklustre titles would do little to drive software sales during a tough first half of 1984. However Imagine's priority at this point wasn't ordinary cassette games, retailing at £5.50, but rather the infamous 'Megagames' that would sell for five to six times as much.

Two Megagames were advertised – *Bandersnatch* for the Spectrum and *Psyclapse* for the Commodore 64 – and both required a hardware add-on containing a ROM chip that would be used to store "cartoon animation" and "real sound", according to Mark. The obvious question was would people spend up to £40 on a Spectrum or C64 game, no matter how fancy? Internally, the real question was could the firm even *deliver* such titles? Beyond the actual software development – which would drag on and on for months, forcing delay after delay – the required hardware would need to be developed and manufactured. The required investment was rumoured to be £1-2 million and Imagine didn't have that kind of cash. In fact, finding the money just to keep the business afloat was difficult. In April 1984 it received its first 'winding-up' order for non-payment of debts.

To raise money the firm put its back catalogue of titles up for sale, eventually flogging them to Beau Jolly (who would reissue them on compilation packs). The next step was to vacate the building on Sir Thomas Street, a move that also saw ten employees laid off.

But it was to no avail, as a winding-up petition brought by publisher VNU was successfully issued on 9 July 1984. The whole Megagame saga, which marked the beginning of the end for Imagine, will be well known by many readers as a BBC TV crew was on location in Liverpool at the time, filming a programme about the UK software scene. What might have been a drab business documentary turned into TV gold as the bailiffs descended. Imagine didn't so much hit the buffers as derail spectacularly in front of TV cameras.

What the cameras didn't capture was David telling Eugene and John to grab the Sage IVs containing the Megagames and hide them in the toilets until the bailiffs had left the building! With the code rescued, John would continue to work on *Bandersnatch*. "I was locked away in a room in Dave Lawson's house to finish the game after Imagine had gone down," he reveals. None of the Megagames would materialise however, although elements of *Bandersnatch* would surface in later games by Imagine alumni.

It would take a long time for the dust to settle. Accusations flew and an acrimonious battle broke out between the directors, with the various factions within the business clearly exposed. Of course the drama was diligently reported by the computing press (many of whom were creditors due to unpaid advertising). *Your Computer* magazine even asked Bruce to pen a piece about the firm's demise in which he listed all of the mistakes he felt were made, pointing the finger ▶



» [VIC-20] The entertaining platformer *Wacky Waiters*, written by Imagine's resident 6502 programmer Eugene Evans.









where are they now?



Ian Hetherington

■ Imagine's financial director has enjoyed many directorships. He was a founder of Psygnosis, the publisher that would become successful during the 16-bit era and beyond. He later cofounded Evolution Studios and was chairman of Realtime Worlds. He's currently CEO of eeGeo, a Dundee developer specialising in 3D mapping.



Eugene Evans

■ Eugene briefly joined Psygnosis before leaving to start his own company, Graphic Final, which produced *Bermuda Project* for Mirrorsoft in 1987. He then moved away from coding, and the UK, relocating to the US where he would later land various senior roles at Viacom, Zipper Interactive, Mythic Entertainment and Electronic Arts. Presently he's an industry advisor and consultant.



John Gibson

■ He was one of five ex-Imagine developers who established Denton Designs. His game *Gift From The Gods*, which was published by Ocean, was clearly based on *Bandersnatch*. He left Denton to go freelance for several years, before joining Hetherington at Psygnosis in 1990. He later fulfilled senior programming roles at Warthog and Evolutions Studios. He's now retired.



Steve Blower

■ Following the Imagine fallout, Steve joined Ocean as creative director, a position he held until 1997. He then moved to Ideogram, developing interactive content for learning applications and games. He currently runs WebKwik, a web design business based in Southport.



Bruce Everiss

■ He has occupied various sales and marketing roles over the years, including a brief time at Tansoft and two spells at Codemasters. In 2011 he joined David Darling at mobile game developer Kwalee and left in 2013.



David Lawson

■ David cofounded Psygnosis with Ian Hetherington and Jonathan Ellis in 1985 and had credits on several of its games, including *Brataccas*, *Barbarian* and *Obliterator*. The rest is sketchy. He appears to have left the games industry soon after.



Mark Butler

■ After Imagine Mark joined Liverpool-based developer Thor/Odin as a director. That appointment didn't last long and his career after that is unknown.

"The 8-bit game market was killed by tape-to-tape copying"

Bruce Everiss

▶ at the lack of financial controls, the massive rent bills, the failed Marshall Cavendish deal, the Megagames and more. He now believes that software piracy was largely responsible. "The article could have done with more context," he says, in response to his assessment at the time. "The 8-bit game market was killed by tape-to-tape copying. If customers aren't paying for their games then you can't pay the staff. But major management mistakes meant that Imagine was the biggest and the first to go."

Bruce and many of the other individuals involved in Imagine would go on to enjoy careers in the software industry. The Imagine brand continued too, as Ocean Software, formally Spectrum Games, snapped up the rights to the name. The deal didn't include any of Imagine's liabilities, obviously, but it did include several of those Sage IV development machines and some games that were in development at the time of the collapse (*World Series Baseball* was one such title). The Imagine name would prove valuable to Ocean later on, when a deal to convert Konami's arcade games to home computers nearly failed because the Japanese firm felt its name would be overshadowed by Ocean's. The solution was to publish the games under the Imagine name, so for the next few years Imagine became the label for many of Ocean's hit coin-op conversions.



» [VIC-20] Another early Eugene effort was *Catcha Snatcha* where you played a fraught store detective.

Talking about the purchase of the Imagine name, Ocean's Paul Finnegan remembers: "We realised the amount of effort and money that went into building the Imagine brand was valuable and we picked it up for a very reasonable price." Interestingly Paul spent six months at Imagine in a sales role prior to joining Ocean, so he's ideally placed to comment on the how the two firms differed. "Imagine was brilliant at generating stories and that helped get the games industry noticed," he says. "The biggest problem was there was no real financial control and budgeting. I used to joke that even the cleaner had a Porsche! There was a big difference between Ocean and Imagine. The two main shareholders at Ocean were much more experienced and had been successful in different businesses. They grew Ocean in a steady and structured way and waited for the business to make money and have a firm footing. Imagine just spent all the money it made and borrowed off the back of an incredible first year."

For Eugene, Imagine was a valuable learning experience. "It was great to start with but over time, as we struggled to quickly grow the company, it became more challenging. Don't forget that early projects were still one person, or two at the most if an artist was involved. Once we got to the Megagames the

weathering the storm

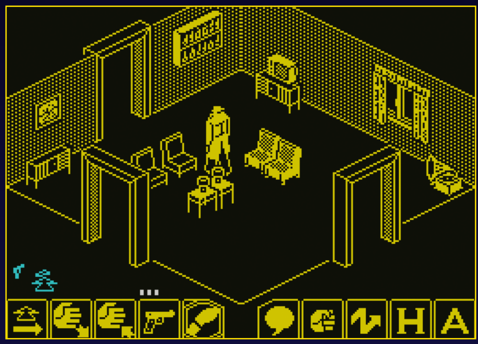
The Imagine name lived on at Ocean Software, and it was attached to some decent games



HYPER SPORTS

VARIOUS, 1985

■ Ocean scored a huge hit with *Daley Thompson's Decathlon*, which was its own spin on Konami's successful *Track & Field*, so it was only fitting that it converted the official arcade sequel. And it did a fantastic job, with the range of minigames well emulated across a range of machines.



MOVIE

VARIOUS, 1986

■ One of the few titles that Ocean released on the Imagine label that wasn't a coin-op conversion, this isometric adventure for the Spectrum and Amstrad delivers an enjoyable detective tale. It does suffer from some, frankly, obscure puzzles, but overall *Movie* is a top-drawer title.





» [Atari ST] *Bandersnatch* eventually became *Brataccas*, released by Psygnosis for 16-bit machines in 1986.

projects involved ten or 15 people and things became more complicated. We were figuring out what it even meant to work as a team. These days so many games companies go out of business Imagine's collapse is no longer news. It was a big deal at the time for those of us involved but now over this span of time it's just a short chapter in a long story. It has always been a difficult business but we keep going because we love it."

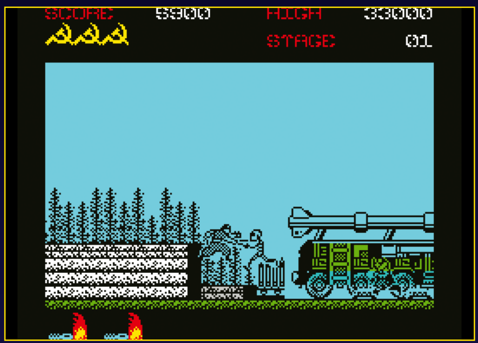
Looking back, it's easy to get caught up in the fall of Imagine and forget that the firm did produce some great games in its first year and fostered genuine talent. It was also quite progressive in some respects, with the introduction of development teams and professional-quality packaging. Bruce agrees, naturally. "We were the trailblazers that took the industry from the kitchen table to consisting of proper, departmentalised organisations. All the others used us as a template. Much of how the industry still runs today was pioneered at Imagine, from development through to marketing with all the ethos and culture that makes a great organisation. We were almost certainly the first UK games company to use dedicated professional artists and to employ sound specialists. Obviously we made many mistakes along the way – inevitable when you are doing so many things for the first time."

John concurs. He views Imagine as one of the founding fathers of the UK games industry. "Imagine was Dave Lawson," he says. "It was his innovation and drive that made the company what it was and ultimately led to its demise. If he hadn't disappeared into obscurity we would be hailing him as one of the industry's visionaries. And had Ian Hetherington not been involved with Imagine, Psygnosis wouldn't have become what many believe was the UK's greatest ever software house. I feel very lucky to have been a part of both."

If Gibson could go back in time he would have just one piece of advice for Imagine's directors. "I would tell them to do it the same all over again", he says, smiling. "I enjoyed every minute of my 32 years in the industry but those 18 months at Imagine were the best." *

Thanks to our four interviewees, John, Paul, Bruce and Eugene, for their time. Special thanks to Mark R Jones for imagery.





GREEN BERET

VARIOUS, 1986

■ On most 8-bit machines this is an excellent conversion of Konami's coin-op that perfectly captures the playability, challenge and, of course, over-the-top violence of the original. It was with releases such as *Green Beret* that the Imagine name rediscovered its reputation for quality.



ARKANOID: REVENGE OF DOH

VARIOUS, 1987

■ As bat-and-ball games go this is one of the very best, taking everything that was great about the first game and adding new brick types, new power-ups (including some wild ones), new boss encounters and twice the amount of screens. A classy update of a classic concept.



TARGET: RENEGADE

VARIOUS, 1988

■ The computer conversions of *Double Dragon* were terrible, but they were superfluous anyway as *Target: Renegade* did the scrolling beat-'em-up thing first, and it did it far better. The addition of a co-op mode for two-player tussles and usable weapons elevated this Ocean version above the fantastic original.

THE HISTORY OF

ALIEN

For over 25 years we've been embroiled in a war with an extraterrestrial menace, masterminded by the devilish minds at Team17. Mike Bevan looks back on an alternate part of the gaming universe, where no one screams as much as an Amiga owner







BREED

If there's one thing to be learned from videogames it's that humans and aliens just don't get on. If you're going to build a space station at the fringes of colonised space, aliens are going to get in and eat everyone, leaving it to a small band of highly-trained operatives to sort out the mess – who will probably then get eaten too.

Such is the scenario in *Alien Breed*, a futuristic top-down shooter for Commodore's Amiga developed by Team17, a studio perhaps more famous as the producer of the popular *Worms* series. Released in 1991, just as the first iterations of the Amiga were coming of age as popular and affordable gaming platforms, *Alien Breed* was, for its day, the most stunning-looking 2D corridor shooter that wasn't a *Gauntlet* arcade machine. With an atmosphere reminiscent of several iconic sci-fi films, it took players into nightmarish, convoluted levels that made Hampton Court maze look like a simple stroll around the Serpentine – and that was before even having to worry about what was coming after you.

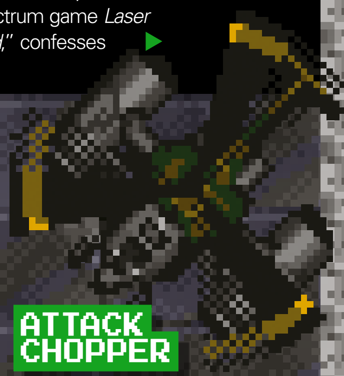
The original game, a collaboration of the talents of Amiga programmer Andreas Tadic, artist Rico Holmes, and musician Allister Brimble, was made possible by the involvement of Team17 founder Martyn Brown. For the newly-formed company, *Alien Breed* would be only its second game development project after its beat-'em-up, *Full Contact*.

"I'd been involved with Andreas, Rico and Allister at 17-Bit [an earlier Amiga demo/software company] and I'd brought and introduced the team to each other a while before," remembers Martyn. "I parted ways with 17-Bit and came back to set up Team17 in late 1990. At the time, the guys had produced a title for Codemasters (*Miami Chase*) and had *Full Contact* almost complete and *Alien Breed* (designed in the main by Rico) was about 50 per cent complete. The plan of sorts was to try and make our spin [on] popular arcade titles, since largely speaking we felt people didn't do them justice on the Amiga hardware. The main idea was to shake up two of our favourite things, *Gauntlet* and a certain movie series from 20th Century Fox."

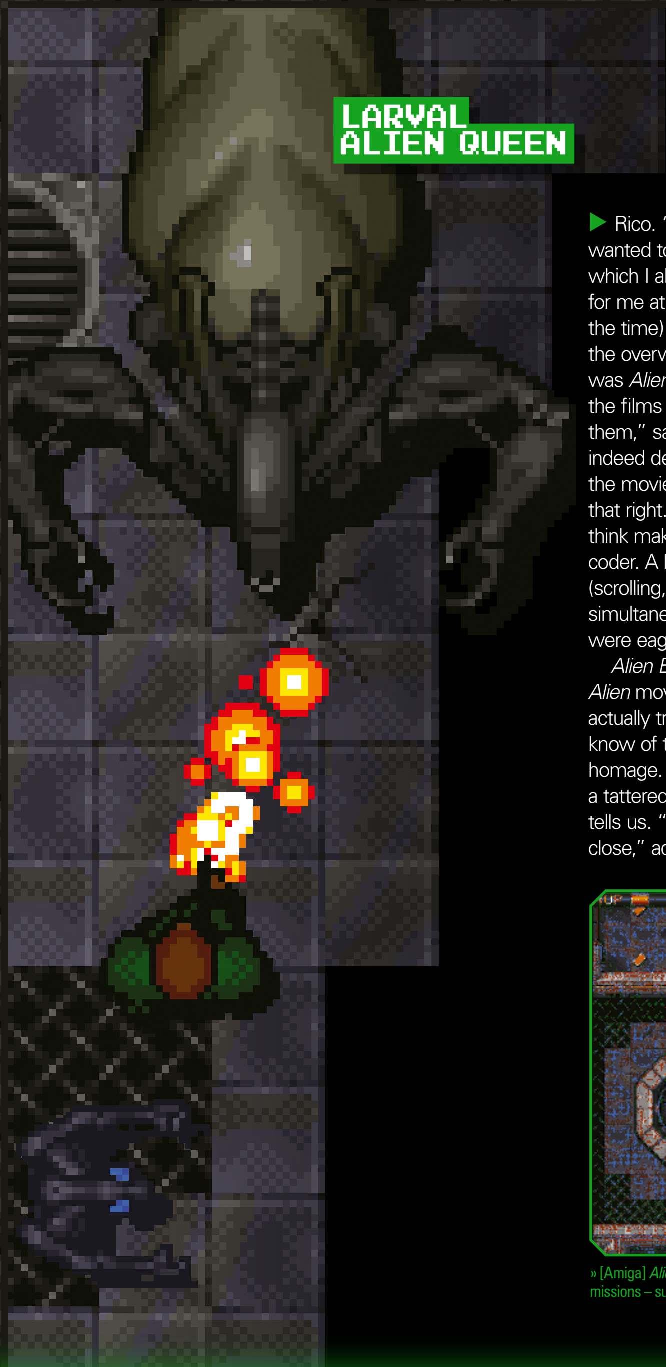
"I was a super geek for the Spectrum game *Laser Squad* and the C64 game *Paradroid*," confesses



» [Amiga] If it were us, we'd be straight back on that spaceship.







Rico. "*Alien Breed* was the crossover that I always wanted to play. People often compared it to *Gauntlet*, which I also loved, but was actually not an influence, for me at least (it was only available on the Atari ST at the time)." Obviously, outside of other videogames, the overwhelming influences on the upcoming title was *Alien* and its sequel *Aliens*. "Rico and I had seen the films over and over again, and were big fans of them," says Andreas. "The behaviour of the aliens was indeed designed to resemble the aliens' behaviour from the movie. We did spend quite some time on getting that right. Quite a few iterations, if memory serves. I think making *Alien Breed* was when I really became a coder. A lot of foundation was there from *Miami Chase* (scrolling, sprites, blitter etc.) and had been worked on simultaneously to the making of *Full Contact*. I think we were eager to put the tech to work."

Alien Breed was, in its own way, a love letter to the *Alien* movies and Martyn points out that Team17 did actually try to approach the filmmakers to let them know of their intentions for its forthcoming gaming homage. "We tried to get the licence from Fox and a tattered fax from them still exists somewhere," he tells us. "In a funny way, the likeness was a bit too close," adds Rico. "I say funny because in the letter


» [Amiga] *Alien Breed: Special Edition 92* gave you a bit more variety in missions – such as destroying whatever these big round things are.

"LOGGING INTO TERMINALS WAS INSPIRED BY ALIENS"

Andreas Tadic

of consent from 20th Century Fox the gist was that they would accept our 'look and feel' to the games we were producing as long as we didn't try and make any movies based on the franchise. At the time that was hilarious to us – 'Who'd make a movie based on a videogame?!' These days it's a different matter."

While *Gauntlet* wasn't so much of an influence on Rico as main designer, one feature that the team wanted its game to share with that coin-op was the inclusion of a co-operative multiplayer game mode. "We couldn't really do four players [like *Gauntlet*] on account of only two joystick inputs and how the Amiga's hardware sprite system worked, so two-player co-op was key," says Martyn. "There was some careful design [needed] in terms of resource sharing for sprites and how many weapons/objects could be rendered and reused, but it wasn't too much of a challenge compared to the design of the game itself," says Andreas. Another important feature of *Alien Breed* is the fact that it was designed for 1MB Amigas, requiring a memory expansion on the older Amiga 500 model. This freed up space for graphics and sound and allowed for a more polished overall game experience. "It was a bold but a really good decision," says Andreas. "A good sign of that is that sales of memory expansions for the Amiga boomed after *Alien Breed* climbed the charts."

Another impressive feature of *Alien Breed* for its time was the 'Intex Computer system', which enabled players to log into terminals where they could spend

ALIEN BREED TIMELINE

We chart the terrifying alien onslaught over the years

1991


ALIEN BREED
AMIGA

1992

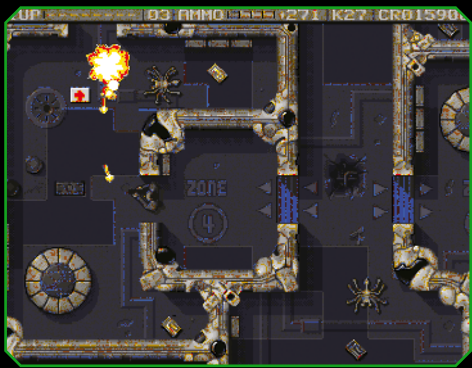

ALIEN BREED: SPECIAL EDITION 92
AMIGA

1993


ALIEN BREED II: THE HORROR CONTINUES
AMIGA

1994


ALIEN BREED: TOWER ASSAULT
AMIGA



» [Amiga] *Alien Breed II* here showcasing why homing missiles are both fun to use and incredibly useful.



» [Amiga] *Alien Breed II*'s new outdoor levels relentlessly throw attack choppers at you.

collected credits on upgraded weapons, health packs, and extra lives, check their location and mission status, and even play some 'futuristic entertainment' (a tongue-in-cheek version of *Pong*). "Logging into terminals was inspired by *Aliens* I think, and an excellent opportunity for the gameplay design," says Andreas. "I'm intensely proud of those to this day," Rico admits. "Not just the look of them, but the introduction of the concept. Every other game of the time that involved power-ups just gave you them. I liked the idea of an in-game currency that you could make choices with. It added to the replay value immensely. The only pity is that it was long before microtransactions were conceived in games and we didn't patent the idea!"

Alien Breed is also notable for its synthesised speech, with the memorably dulcet tones of the ship's computer being provided by musician Allister Brimble's mother, Lynette Reade. "My mum was trained as a professional actress at Central School Of Speech And Drama," says Allister proudly. "She was in the same class as Tony Robinson and won quite a prestigious award for student of the year there. I asked Martyn if she could give the vocals a go. I had to pitch them up a little bit but they ended up being perfect for the game."

Along with the brilliant title music track, Allister was behind the unusual sampled sound effects in the game, some of which came, as he explains, from rather unlikely domestic sources. "The alien's spawn sound was produced by actually cracking an egg into a bowl and then lowering the pitch a little," he tells us. Even more strangely, the death screams of the aliens had an altogether far cuddlier origin. "I had just bought my first sampler, an Akai S950. The first thing I recorded as a test were my Burmese cat, Pandora's kittens. They made a tiny high pitched squeak! I could then play [it] on my keyboard at various pitches and accidentally played a chord low down on the keyboard. It sounded so alien-like that I mixed an explosion with it and used it as the alien death sound. So remember, when playing *Alien Breed* you're killing off poor defenceless little kittens (no animals were harmed however)!"

Adding to the top-notch presentation of the game was an animated introductory story sequence, taking up a whole extra floppy disc. "We got one of



1995

ALIEN BREED 3D
AMIGA



1996

ALIEN BREED 3D II: THE KILLING GROUNDS
AMIGA



2009

ALIEN BREED: EVOLUTION
XBOX 360



2010

ALIEN BREED 2: ASSAULT
VARIOUS

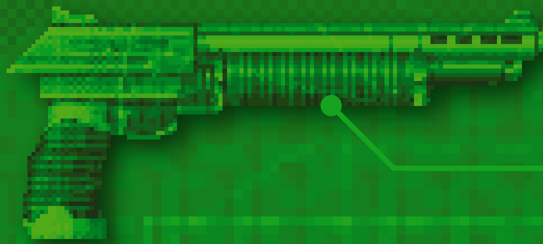


ALIEN BREED 3: DESCENT
VARIOUS



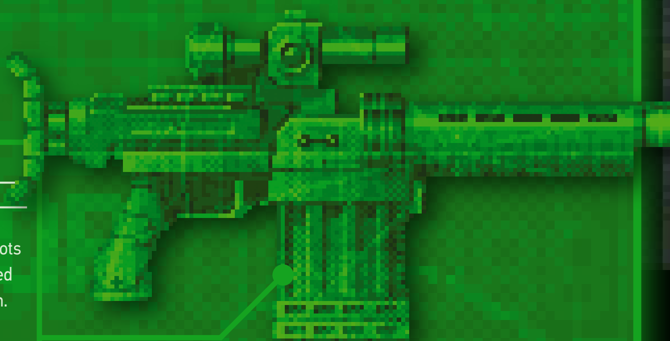
LOCK AND LOAD

The weapons of the original Alien Breed



TWIN RAPID FIRE
2000 CR

■ Upgrades your weedy starting machine gun to a heftier twin firing laser. It's unremarkable, but it'll get you through the game's initial stages.



FLAMEBOW
3100 CR

■ An iconic *Alien Breed* weapon, this beauty shoots bouncing crescent shaped lasers around the screen. Great for clearing out groups of aliens.



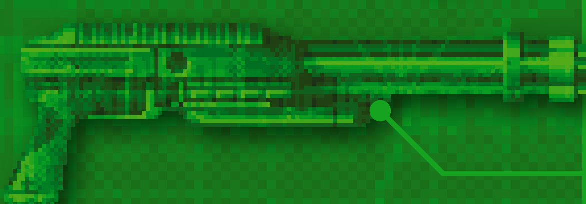
PLASMA SHOTGUN
5300 CR

■ Fires blue slices of death in a handy stream towards the enemy. For the price, though, it's not that amazing, and doesn't bounce like the flamebow.



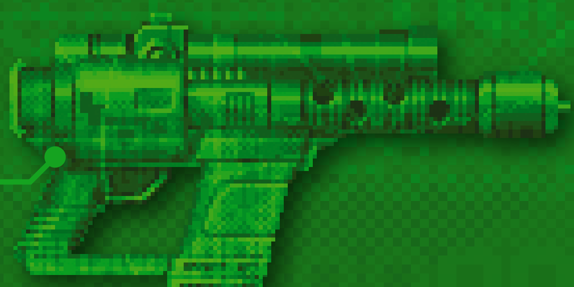
EBON FLAMETHOWER
8800 CR

■ When you really have to toast every last alien in the room to crispy charcoal, this is the weapon of choice. It's also very effective on bosses.



TRIPLE-BARREL LAUNCHER
11300 CR

■ This launcher fires unguided missiles at anything unlucky enough to get in its way, and can sometimes hit enemies hiding behind walls.



ARC LASER
18200 CR

■ The ultimate weapon in *Alien Breed* fires powerful laser beams that, like the Flamebow, bounce around the screen several times clearing out foes.



the guys who were producing the best CG on the Amiga, Tobias Richter," explains Martyn, "and for me it was great to involve such talent after working in the demo side of things with 17-Bit. It just felt natural to do the story thing and it was one area I was involved with strongly whilst the guys were cracking on with the game." It wasn't all smooth sailing in the graphics department, though, as Rico explains. "We weren't rich at the time and I couldn't afford to change my monitor on the first *Alien Breed*. The blue gun on the screen only worked sporadically, so I only had a full-colour screen maybe half an hour per day. Martyn found this unsympathetically hilarious at the time."

Even when it came to shipping the game out to stores, it seems a few last-minute niggles crept in. "Although we playtested relentlessly, I remember us missing a spot where you couldn't finish the game in two-player mode," Andreas reveals. "We ended up as a gang in the Team17 warehouse patching disks with a program I made, literally overwriting a sector on every floppy. Stick an *Alien Breed* disk in the drive, press space and repeat. Like a steel press at Volvo…"

Alien Breed was well received by press and Amiga owners alike, who praised its graphics, sound and atmosphere, and recreation of a true *Aliens*-like immersive experience. "We were very happy with it, but at the time it was a case of knowing we could have done more with more time and experience," says Martyn. "To be honest, at the end of *Alien Breed* we were already talking about the next one or two games, so we moved straight onto those. I think perhaps the relevance passed us by at the time, although nice reviews, feedback and stuff was really appreciated."

As a follow-up, Team 17 produced a 'remixed' version of the game, *Alien Breed: Special Edition 92*,



» [Amiga] Much like the *Alien* film series it drew inspiration from, *Alien Breed* didn't shy away from showing gore.





» [Amiga] If our many years of gaming has taught us anything it's that fire gets the job done.



with all new levels and a number of gameplay improvements. "*Alien Breed: Special Edition 92* was made on the basis of that we could do it with a minimal effort technically," says Andreas. "We could reuse a lot of content and code and release something that people wanted, comparable to releasing a DLC today. [It was] good for us and good for the players."

"I saw an opportunity to 'make good' and reuse/rebalance what we did with *Alien Breed*," adds Martyn. "I thought we could do it reasonably quickly and make the game that perhaps *Alien Breed* should have been. Tidier, more levels, with a better story. We finished it in six weeks, given that we largely reused *Alien Breed* art and animation assets. We decided it should be a budget title because of this. It went to number one in the budget charts in the UK and stayed there for 33 weeks. I'm not sure but I think it's still a record."

The first true sequel for the franchise came a year later, in the form of *Alien Breed II: The Horror Continues.* This sequel took advantage of the updated graphics chips of newer Amiga (AGA) models starting with the Amiga 4000, and later on the Amiga 1200. "The first task was updating our technology to cater for all the new things AGA had to offer," Andreas recalls. "The game utilised 256 colours, bigger sprites and a faster blitter. Both the AGA version and [standard] ECS version were on the same disk for backwards compatibility. Other than that, the graphics were all new, and there was a revamped weapon system, shop and new aliens. Also, there were outdoor levels some other nice touches so there were quite a few bits that made it worth calling a sequel."

Despite these additions, though, for some this sequel was perhaps not quite as evocative and impressively detailed as the previous outings of the franchise. It was also punishingly difficult, even with the addition of level-skipping passwords. "I think there was a bit of pressure on the sequel, an expectancy," Martyn admits. "We produced a much slicker game but I don't think that it hit the heights of the original or the remix. We were working on two or three games at the same time with the same team and maybe it showed in terms of ideas."

But with the *Alien Breed* series still a huge marketing flagship for Team17, Martyn was keen to expand the reach of the franchise, with an ambitious 2D swan song, *Alien Breed: Tower Assault.* This final 'traditional' *Alien Breed* would see release across all Amiga formats, including the new CD32 console, along with the PC. "I wanted to sign off the 2D series in a big way and had an idea of doing a much larger story and a 'spiral' design which allowed many different routes and exploration through the game, rather than the linear level approaches of the earlier games," he explains. "I think it worked well and I was pretty happy with it. We did most of the design work in-house too whilst the guys were busy with *Superfrog*. CD32-wise, we'd been talking to Commodore and they were obviously keen to get support for it, so we span out a version for it." With over 50 levels, more than all the previous *Alien Breed* games put together, *Tower Assault* remains, in this respect, the most expansive game in the series.

By the mid-nineties, though, the traditional 2D shoot-'em-up was facing a stiff challenge from ▶

ALLISTER BRIMBLE

We talk to the man who soundtracked much of the Alien Breed saga



What inspired you when you were working on the *Alien Breed* music?
The inspiration came from a variety of sources. Parts of the melody were Rob Hubbard-inspired but I was also heavily influenced, as I still am today by the choirs from Jean-Michel Jarre and the TV Theme from *Knight Rider*, especially the staccato sections which you hear in *Alien Breed*. I was also using some new software called Soundmon 2.0 which allowed tiny sections of music to be manipulated in real time, adjusting some instruments and transposes for a short phrase of music with the change of a single digit, without having to write the new parts. This way of working led to some inventive composition at times.

How did you find working on the Amiga as a musician? Were there times you wished that you had more memory or other capabilities because of certain restrictions of the machine or the floppy disc format?
I had learnt first on the 8-bit machines where memory was limited to a few KB, so having even 50K for a track on the Amiga seemed loads at first! The memory soon disappeared, though, if you added too many samples. The key was to create really short, tight loops with no clicks on the loop point and that required a lot of work to get right. On *Alien Breed* I first wrote a 30-minute version of the tune with larger samples that came out at around 90Kb. This was too large for the game, so I ended up downsizing to ten minutes and replacing the longer samples with tiny 64 byte clarinet and choir waveforms recorded from a Kawai K1 synth. I'm pleased I did as they actually ended up being a feature of the music!

Did you play much of the *Alien Breed* games yourself as a gamer?
Yes although the Team17 games were brutally hard! I could only get past the first few levels!

Was it nice to get the chance to put some of the original *Alien Breed* music into the more recent outing for the franchise, *Alien Breed: Evolution*?
Yes when Team17 approached me I was very excited to remix the track. Being such an old tune I wasn't really sure how well it would come up but it seems to have stood the test of time well and I was able to modernise it without changing too many notes…

It was great to see your music feature prominently on *The Amiga Works* album. Are you pleased that your work on the series is so well remembered?
Yes, it was one of the first big works I created for a game and I put pretty much everything into it, as much as I could at the age of 21 anyway! Luckily it remixes well in several ways so I was able to produce three variants of it for *The Amiga Works*.

Your may be interested in hearing the tracks at amigaworks.com and allisterbrimble.bandcamp.com.

INFLUENCING ALIEN BREED

The games and films that inspired the series



ALIEN

1979

■ Ridley Scott's seminal sci-fi horror was the celluloid debut of the biomechanical designs of iconic Swiss artist HR Giger, his most famous creation being the iconic Alien itself. Giger's unique style influenced a generation of game designers, as is evident in *Alien Breed*.



PARADROID

1985

■ Andrew Braybrook's classic strategy-based shoot-'em-up is definitively one of the greatest Commodore 64 games of all time. Its setting, an enormous scrolling bas-relief spaceship, was a big influence on Rico Holmes when designing *Alien Breed*'s levels.



ALIENS

1986

■ What's better than one *Alien*? A whole colony swarming with them, of course. James Cameron's stunning movie sequel mixed futuristic horror and good old-fashioned gung-ho militarism in a hugely-entertaining manner, as well as inspiring a few of *Alien Breed*'s weaponry.



ALIEN QUEEN



LARGE CREDIT



MINI ATTACK CHOPPER

▶ the all-new 'breed' of 3D games popularised by *Wolfenstein 3D* and *Doom*. The architecture of the Amiga made it difficult to emulate similar games at anything near the resolution or speed offered by the PC, unless you were some kind of genius. Step forward Andrew Clitheroe, the man behind *Alien Breed 3D*.

"I was at university in York at the time," Andrew remembers. "Everyone was marvelling over *Doom* running on the only PC we had between us, including my girlfriend of a couple of months, so I decided to try and do something similar to impress her. I threw together a demo, and ended up taking it to Team17 at her urging. They liked it enough to ask me to turn it into an *Alien Breed* game."

"Team17 was very much preoccupied with titles they were already working on at the time," Andy continues. "I was left more or less entirely to my own devices. I ended up some getting university friends, Mike Green and Charles Blessing, to help out with the art and some of the editor code, and created all the levels myself. If I recall correctly I nicked at least a couple of textures from *Doom* itself…"

While the resulting *Alien Breed 3D* was certainly one of the best commercial *Doom* clones on the Amiga, it was a noticeably different gaming experience to anything that had come before in the series, something that a few fans were keen to point out. "That's entirely fair, because they weren't," chuckles Andrew. "Nobody from the other games worked on *Alien Breed 3D*, none of the defining features, like the weapon shops, were ported across. It was to all intents and purposes a standalone title."



» [PC] *Alien Breed 3: Descent* is the last current game in the series and was released in 2010. It's unclear if any future games will appear.

> "I NICKED A COUPLE OF TEXTURES FROM DOOM"
>
> Andy Clitheroe

***Alien Breed 3D* was successful enough to spawn a sequel, *Alien Breed 3D II: The Killing Grounds*, but as Andrew admits, many Amiga users found the game a nightmare for all the wrong reasons.** "I wanted to push the boundaries even further," he tells us. "All the ideas I couldn't get into the first game, I tried to cram into the sequel. So there was a whole audio sensory, grouping and searching algorithm for the aliens. If they heard you, they would follow the sound. If they reached a point where the sound could have come from two directions, they would split up. Massive waste of time.

"The player didn't know it was going on and had no tools to exploit it," Andrew Continues. "I knew that if you went and stood in a particular place and fired your gun, it would cause a dangerous group of enemies to split up and search for you, but nobody else did, so the game just seemed impossibly hard. The extra AI just made it insanely punishing, I'd completely run out of ideas for levels, and the speed and fun had been crushed by all the extra tech I'd piled on. I think I had a 68060 [accelerator] card, and without that it the game ran like a dead tortoise…"

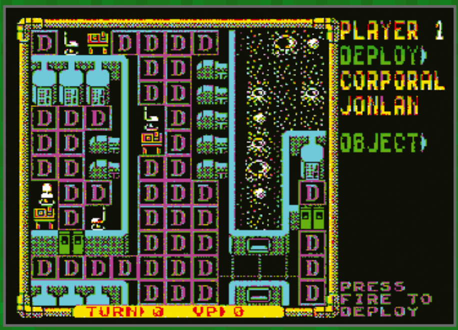
Martyn though is keen to defend Andrew's admirably ambitious efforts with *Alien Breed 3D II*. "It's safe to say it was ahead of it's time, probably by five



GAUNTLET

1985

■ Although Rico dismisses this famous coin-op title as being an inspiration for *Alien Breed*, it's impossible to play the game, especially with another player, and not see certain similarities. *Gauntlet* never gave you the chance to buy a flamethrower, though.



LASER SQUAD

1988

■ This turn-based strategy game, originally designed for Sinclair's ZX Spectrum by Julian Gollop, has the honour of being the inspiration for two great extraterrestrial-themed franchises, namely *X-Com* and *Alien Breed*. Rico cites it as one of his favourites.



MIAMI CHASE

1990

■ With this top-down Amiga racing game, programmer Andreas Tadic and artist Rico Holmes had the opportunity to master smooth, multi-directional scrolling and detailed overhead visuals a year before the duo went on to create the original *Alien Breed*.



» [PC] *Alien Breed: Impact*, released in 2010 is an updated version of *Evolution* and featured a new upgrade shop and tweaked aliens.





years," he says. "If the first 3D game was *Doom*, this was *Quake*. A fully-3D experience rather than a cleverly extruded 2D/3D one. It was right at the end of the Amiga's shelf life, unfortunately."

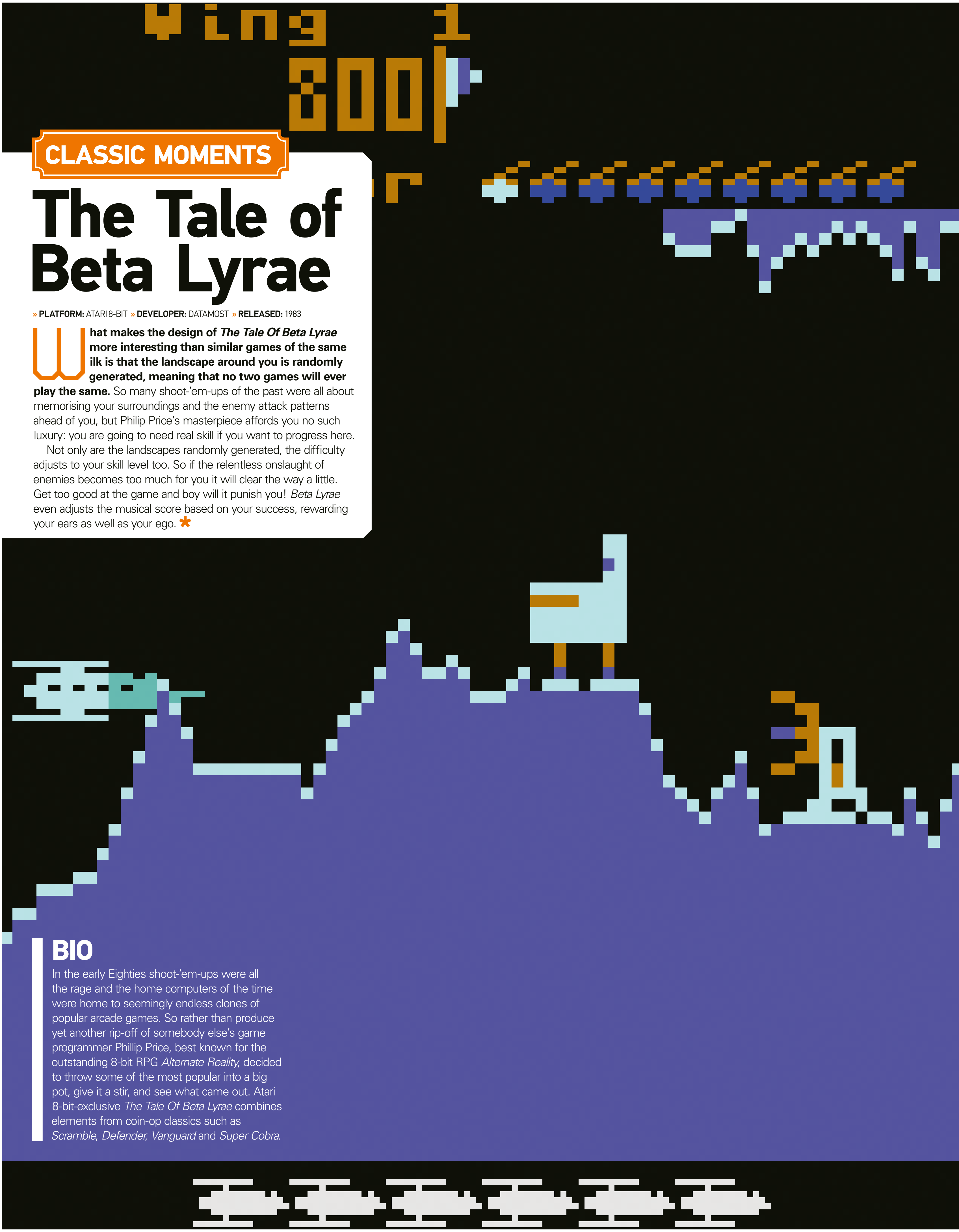
The death of the Amiga as a commercial platform marked a lengthy hiatus for the *Alien Breed* franchise, until it was revived with an episodic trilogy of games starting with 2009's *Alien Breed: Evolution*. "The industry changed and we took a while to adapt to new platforms and new business models," Martyn explains. "Team17 survived. We had to partner to produce new games, at least until digital distribution became a viable option. We tried various *Alien Breed* games, each getting so far down the line, but not getting enough traction to publish since the cost of publishing rose above development costs significantly. With Microsoft and Xbox live, it really inspired independent publishing again and we enjoyed a very good and close relationship with the Xbox Live team. One of their strategies was to bring episodic games to the service and we effectively trialled that with *Evolution*. The team (around 40 people, ten times as many as the original) had a real blast making the game and we're very proud of how it looked and played."

Just over a quarter of a century after its conception, *Alien Breed* is still a fondly remembered series for those who grew up with the Amiga, and the series' legacy still lives on, with recent releases of the original *Alien Breed* for mobile platforms, and a compilation of *Alien Breed* and *Tower Assault* for PC/Windows. "We were lucky to have Martyn as our hub of contact," says Rico. "He had an knack for knowing who would gel as friends. It was a remarkable time, and creativity was treasured. We all got on like a house on fire, and we were all fuelled by the same energy both socially and professionally. There's little in the world better than working with your best friends."

"It's those early days I cherish," Martyn agrees. "With three people I'm still very close with these days, we produced something people consider pretty golden so we can be thankful for that. We were lucky to be around in that time and lucky to effectively work how we wanted. It's something that never left me in terms of how I want to work in the games industry and we try and to do that today, albeit with tighter production."

For *Alien Breed 3D* creator Andy Clitheroe, the involvement with the saga even led to a 'special edition' for his own family. It turns out that the 3D demo he created to impress his girlfriend at university really did the trick. "It worked…" he says. "We're married with a ten-year-old daughter now."

Alien Breed: not only scaring the pants off Amiga users, but also helping bring new life to the world. Which are both fine things, we're sure you'll agree. *



CLASSIC MOMENTS

The Tale of Beta Lyrae

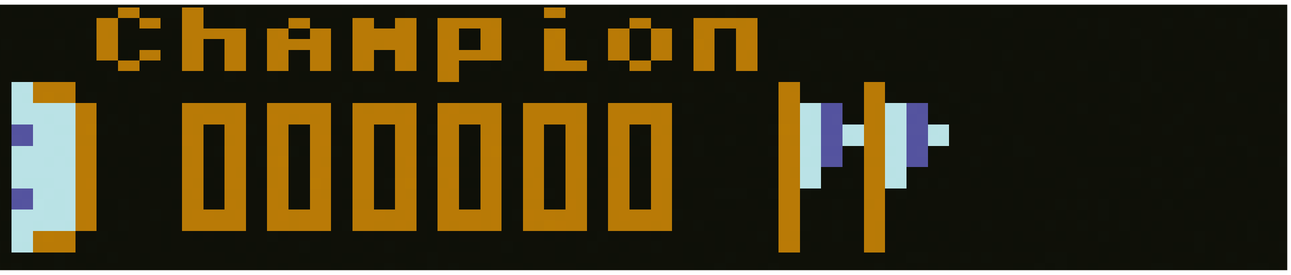
» **PLATFORM:** ATARI 8-BIT » **DEVELOPER:** DATAMOST » **RELEASED:** 1983

What makes the design of *The Tale Of Beta Lyrae* more interesting than similar games of the same ilk is that the landscape around you is randomly generated, meaning that no two games will ever play the same. So many shoot-'em-ups of the past were all about memorising your surroundings and the enemy attack patterns ahead of you, but Philip Price's masterpiece affords you no such luxury: you are going to need real skill if you want to progress here.

Not only are the landscapes randomly generated, the difficulty adjusts to your skill level too. So if the relentless onslaught of enemies becomes too much for you it will clear the way a little. Get too good at the game and boy will it punish you! *Beta Lyrae* even adjusts the musical score based on your success, rewarding your ears as well as your ego. *

BIO

In the early Eighties shoot-'em-ups were all the rage and the home computers of the time were home to seemingly endless clones of popular arcade games. So rather than produce yet another rip-off of somebody else's game programmer Phillip Price, best known for the outstanding 8-bit RPG *Alternate Reality*, decided to throw some of the most popular into a big pot, give it a stir, and see what came out. Atari 8-bit-exclusive *The Tale Of Beta Lyrae* combines elements from coin-op classics such as *Scramble*, *Defender*, *Vanguard* and *Super Cobra*.



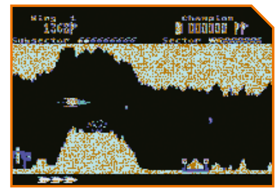
MORE CLASSIC THE TALE OF BETA LYRAE MOMENTS

Magnetic Personality



Without doubt the most difficult enemy you encounter in this game are the magnetic bombs that are launched up into the sky. These suck you towards them with great force meaning you only have seconds to destroy them before you meet your demise. Holding the reverse direction on the controller will buy you a little extra time however.

Clastrophobic Caverns



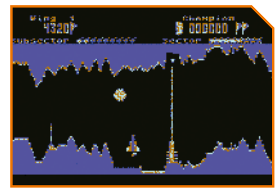
The key element that Phillip Price stole from Konami's classic *Scramble* is the journey through the tight craggy caverns between each level. This means that the aggressive enemies are not the only thing you have to contend with as trying to steer your craft through the tiny gaps in the rock becomes your ultimate focus.

Sigue Sigue Sputnik

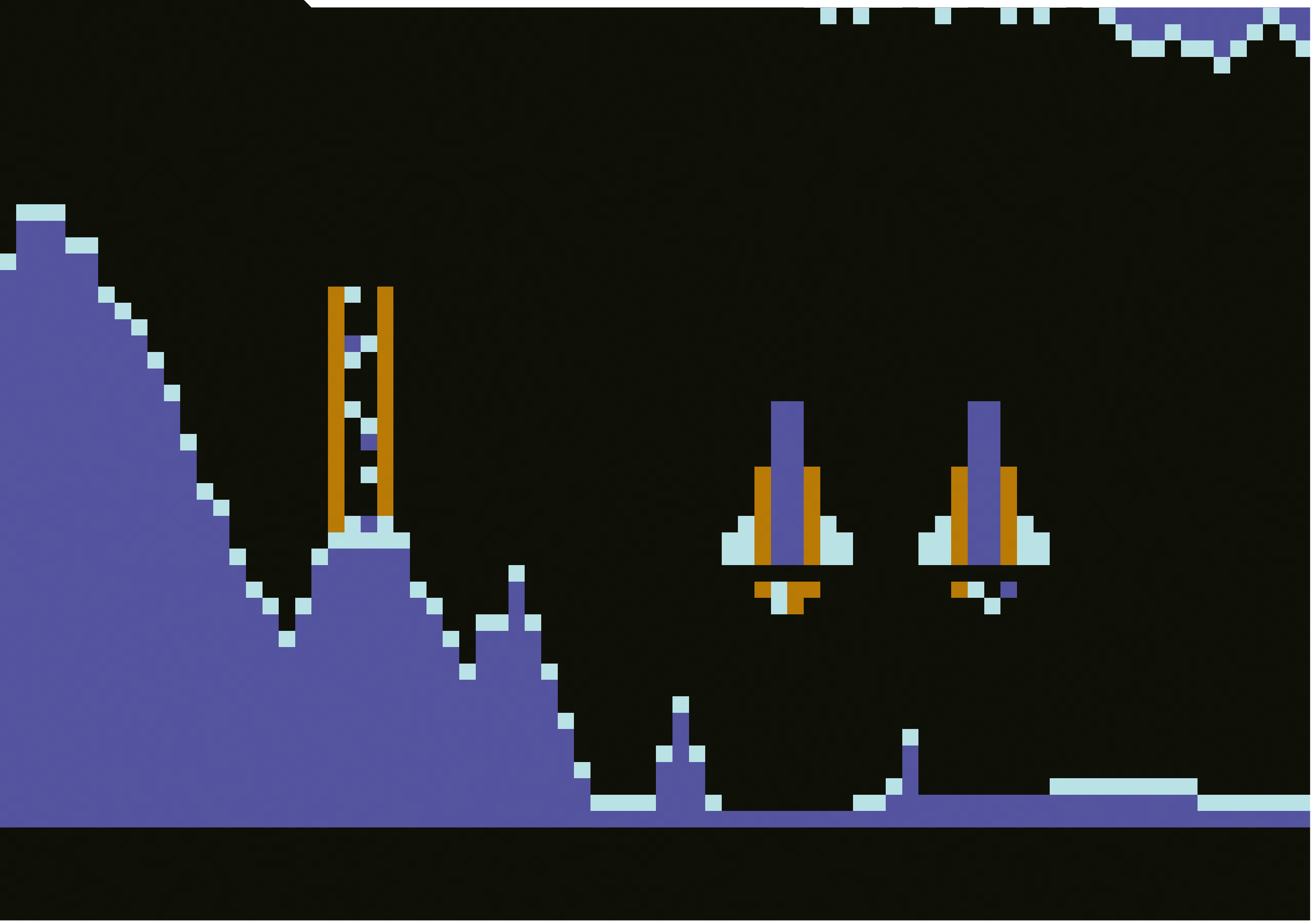


One of the most common enemies in *The Tale Of Beta Lyrae* is the satellites. These metallic objects litter the space around you and cannot be destroyed, so evasive manoeuvres are the order of the day here. Sometimes you will come across whole clusters of them and this will require some highly skilful piloting to make it through alive.

Eat Laser Death



On the later levels of *Beta Lyrae* a new enemy is added that causes you no end of trouble. The laser cannon shoots up into the air blocking your path with a wall of lethal light. Timing is the key to getting past these pesky foes as you must wait for a gap between firing then dash past them as quick as you possibly can.



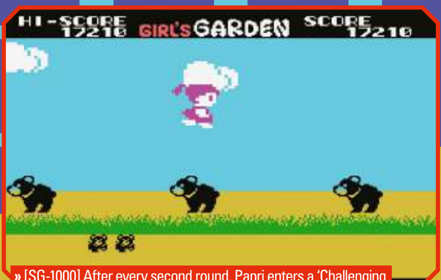
Minority Report

INTERESTING GAMES YOU'VE NEVER PLAYED



SG-1000

Despite the relatively small library on Sega's first home console, there are quite a few hidden gems to discover, many of which can't be found anywhere else. Scott Marley knows where they are, and has laid them out for your perusal



» [SG-1000] After every second round, Papri enters a 'Challenging Stage', jumping over a marauding stream of bears for bonus points.



» [SG-1000] These dandelion flowers only bloom for a short period, so grab 'em quick. Don't forget the Clarityn!

GIRL'S GARDEN

■ DEVELOPER: **SEGA** ■ YEAR: **1984**

■ The history of games primarily aimed at a female demographic is littered with disappointments – from licensed cash grabs to cynically recycling clichéd effeminate appeal (just whack on a bow and make it pink). It wasn't always this way. Back in the early Eighties, gender segmentation wasn't on anyone's radar because making games with the broadest appeal was good for business. However, as genres started to emerge around the imitation of prior successes, it soon became clear that the base units of gaming skewed towards the masculine – shoot things, punch things, kill things, race things fast. Arcades started to eschew the market of those of a pacifist, feminine persuasion. Noticing this trend, Sega tasked coder Yuji Naka with the notion of creating a female-friendly game for the SG-1000, probably the first time a game was designed for girls on a home console. Naka designed the game around the central mechanics of collecting things and evading things, utilising the passive gaming actions that lent *Pac-Man* and *Q*Bert* their universal appeal.

The game stars a young girl named Papri and her boyfriend Minto. This innocent childhood romance is threatened by the game's antagonist, Cocco: a conniving strumpet who is intent on stealing the naive and easily manipulated Minto away from your pure-hearted avatar. To affirm her love and protect Minto from the machinations of the scarlet interloper, Papri goes out into the garden to collect a bouquet of ten flowers for her sensitive beau.

The game mechanics are akin to a sideways *Frogger,* where good timing and strategically planning your route is a must. Instead of gaps in the traffic, Papri must wait for flowers to open up in full bloom before she picks them. Collecting budding flowers too soon are no good and don't count towards your bouquet, but flowers that have been untended for too long start to wilt. These blackened husks should be avoided, as they remove half your current bouquet. Sometimes, taking the penalty is necessary when they line the only route around environmental hazards such as rocks and streams. That's all before mentioning the ferocious girl-eating bears that are also patrolling the garden. They start to chase Papri if she strays to close, and can only be pacified with a limited supply of honey pots.

IF YOU LIKE THIS TRY...

MS. PAC-MAN

ARCADE



■ For a contemporaneous alternative, look no further than Midway's unauthorised sequel. The original *Pac-Man* was touted as 'the first commercial videogame to involve large numbers of women as players', so for the next instalment they whacked a bow on it, amongst other worthy enhancements.

NIGHTS INTO DREAMS

SATURN



■ If you squint a bit, the section in the game where you walk around a garden as Claris or Elliot searching for Nights feels a little bit like a 3D homage to Yuji Naka's first game. Sort of. Both games are ultimately about racking up a high score too, so there's a pretty obvious similarity in that.

HARVEST MOON

SNES



■ Combining the themes of horticulture and romance are also par for the course in this long-running series. Marriage side quests are completed by raising the affection of eligible bachelorettes through courtship and, when an event is triggered, helping your sweetheart through a crisis.



FIGHT FOR LOVE

■ Each round has a time limit, but rather than a countdown, Minto is shown slowly inching away from honest Papri and towards hateful Cocco.

DOES SHE SCORE?

■ The game has no end, and will continue on to progressively more difficult rounds, engendering Papri's mission of love a hopeless sense of futility.

DON'T BEE AFRAID

■ Papri isn't without allies, as the friendly bees drop bonuses to collect, and replenish honey pots when they are collected whilst pollinating a flower.

WATER HAZARD

■ Papri can't swim, and will drown if she steps too close to the edge of any rivers or lakes. Some would argue the collision detection can feel a little unfair sometimes.

The garden is brightly coloured and charmingly animated, an early example of Sega's distinctive 'blue skies' appeal. Little touches, such as using hearts as a life counter, which float up the screen to revive a fallen Papri with the power of love, help to only reinforce the sweet romantic theme.

While similarities can be made to other games of the era, the way in which the elements have been united under a cohesive theme makes *Girl's Garden* still feel fresh, innovative and unique, even today some 30 years after its release. It's regarded as one of the earliest examples of the Japanese Love Sim subgenre, but perhaps it's more accurately described as a 'Jealousy Sim'. If love is the universal language, then jealousy can't be too far behind, providing *Girl's Garden* with a timeless appeal for both female and male gamers alike.

Minority Report

GP WORLD

■ PUBLISHER: **SEGA** ■ YEAR: **1985**





» [SG-1000] The track editor is a great asset, though you need to plan ahead to work within the size limitations.



» [SG-1000] Braking hard and dropping to low gear should avoid most accidents (not shown above).

■ The original *GP World* is a little known milestone in Sega's impressive back catalogue of arcade racers. Utilising twin monitors for an 'ultra-wide screen' view, it was powered by the latest graphical technology – LaserDisc. You'd race a digitally superimposed F1 race car over video footage from four different race tracks. The realistic vistas streaming from the LaserDisc really wowed punters back in the day.

When Sega came to port *GP World* for the bantamweight SG-1000 hardware, it was obvious graphical concessions were required. However, perhaps inspired by the impossible challenge, Sega managed to push the SG-1000 to the limit, resulting in the best racer the system has to offer. While trackside detail is kept to a minimum and the screen is heavily bordered by a large map and simplistic cockpit, the game moves at a shockingly slick rate, with perfectly-attuned controls to match the pace. It's perhaps the smoothest experience to be had on a system, which usually begs forgiveness for its stuttering, shambolic frame-rates.

You simply chose your difficulty from the main menu, and then it's off around the world, racing on progressively more complex and difficult tracks. Your aim is to beat the qualifying time over two laps while avoiding other drivers. High-speed collisions tend to result in a messy fireball, so it's best to avoid those. Once you've completed your world tour, there's even an impressive track editor to keep you busy.

The game was sold alongside Sega's 'Handle Controller' steering wheel, which helps bring the arcade experience home. It's the perfect companion to one of the SG-1000's finest accomplishments.

MORE GAMES TO PLAY



» PACAR

■ DEVELOPER: **SEGA**
■ YEAR: **1983**

■ You'd be forgiven for thinking this is just another *Pac-Man* clone, but this is actually a sequel to Sega's original dot-collecting maze-game *Head-On*, released to arcades in 1979. Putting aside who copied who, *Pacar* takes elements from Namco's *Pac-Man*, but adds a neat car-themed twist. Your Pacar has two speeds going forward, but when back-tracking suffers from a slow reverse gear, which significantly changes the way you avoid danger.



» THE BLACK ONYX

■ DEVELOPER: **BULLET PROOF SOFTWARE/SEGA** ■ YEAR: **1987**

■ One of the earliest RPGs in Japan, originally released in 1984 on NEC's PC-88, inspired a generation to take the dungeon-crawling, stat-upgrading, mead-quaffing concept and run with it in new directions. While the game is very primitive and somewhat frustrating to play now, it's worth a look for the ambitious 3D dungeons and to see where it all began. An English translation patch was released in 2010, so you have no excuses.



» CHACK'N POP

■ DEVELOPER: **TAITO/SEGA**
■ YEAR: **1985**

■ Before Bub and Bob stole our hearts, Mr and Miss Chack'n starred in this precursor, featuring the first appearance of iconic enemies. Chack'n can move along the floors and ceilings, defending himself by lobbing grenades. Careful consideration must be made to time explosions into the path of adversaries, retreating outside the blast, and collecting all the hearts before moving onto the next round.



» SHINNYUUSHAIN TOORU-KUN

■ DEVELOPER: **KONAMI/SEGA**
■ YEAR: **1985**

■ Konami's game was localised in Western markets as Mikie, with the setting changed to a school. In this port, the game stars a salaryman, trying his best to negotiate an office romance. Retro connoisseurs of a certain age might find this office setting more palatable in their advancing years, living out everyone's deep-seated desire to headbutt their supervisor in the face (Hey! – Ed).

HUSTLE CHUMY

■ DEVELOPER: COMPILE ■ YEAR: 1984



■ From the beginning, Compile was a close friend and ally to Sega, helping to port some of the earliest titles to the SG-1000. It should come as no surprise, then, that a great many of the talented studio's formative works can be found on the system, perhaps exemplified by this jazzy little number.

Hustle Chumy stars a cute little sewer rat named Chumy, and his raison d'être is to eat and not be eaten. The plan is to scurry around each sewer, eating apples and other food items while evading enemies before returning to the safety of Chumy's mouse hole. However, there is a catch: as Chumy indulges in his favourite pastime, he starts to waddle around the stage, weighed down by his overstuffed belly. A simple task now requires a more strategic approach, as you need to plan for when the little critter will struggle to return to base after eating his fill.

Chumy isn't defenceless, though, and can shoot fireballs at his opponents. Handily, the range of these projectiles extends when he gets slower. Also, Chumy can leap in a quick arc that's calibrated for clearing enemies when timed right.

From these simple mechanics, a complex and engaging puzzle platformer is born, and is another feather in the cap of Compile's overstuffed feathery crown.





» [SG-1000] How do you like them apples? Quite a lot, if you ask Chumy, who disregards their unsanitary location.

RETRO STINKER

» SPACE MOUNTAIN

■ DEVELOPER: TSUKUDA ORIGINAL ■ YEAR: 1984

■ Ambitious *Star Wars* clone with a broken trench run that renders collisions unavoidable, made worse by the high price it still commands due to its rarity. Stick with Sega's own *Zoom 909* instead.



» ORGUSS

■ DEVELOPER: SEGA
■ YEAR: 1984

■ Based on the Eighties anime, *Orguss* is a side-scrolling shooter with beautiful backgrounds and a transforming robot. In mech form, you can deal out unholy firepower across land, sea and air. With the flick of a switch, you transform into a sleek and nimble jet, dodging bullets and screaming ahead at an increased clip, but only above a safe altitude. You might have heard of its non-*Macross* sequel on Master System: *Transbot*.



» CHAMPION BILLIARDS

■ DEVELOPER: COMPILE
■ YEAR: 1986

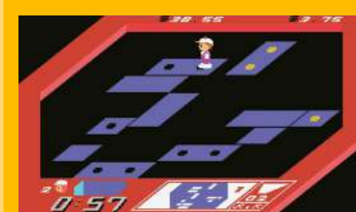
■ Of all the *Champion Sports* games, *Billiards* is the one to go for. While the ball physics are solid, this is not a serious simulation. Compile's surreal take on *8 Ball* has more in common with games like *Zany Golf* or *Marble Madness*, as you sink the balls across a range of different tables. Balls can be cracked open to release Sega's Flicky, but points are only awarded for sinking balls.



» STAR JACKER

■ DEVELOPER: SEGA
■ YEAR: 1983

■ Sega's answer to Namco's *Xevious* added a twist to the shoot-'em-up formula. Rather than have an abstract stockpile of lives, you begin the mission with four ships flying in formation. Your squad has maximum assault capability from the outset, with all ships firing, however you can't protect your cluster of fighters forever, and before long you'll be left to fight alone as The Last Starfighter (Get out! – Ed).



» ROCK N' BOLT

■ DEVELOPER: ACTIVISION/SEGA
■ YEAR: 1985

■ One of the more obscure games to come out of the Activision stable, this obliquely-projected puzzler features high-rise construction worker Louie, whose job is to lock down any loose girders into their correct placements according to the plans shown. Forethought is required to maintain a path back to the elevator which takes you up to the next level. Of all the available ports, the SG-1000 version is the definitive one.

40 YEARS OF THE

Commodore



PET

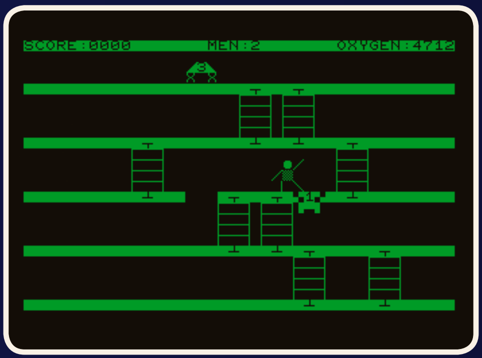
IN CELEBRATION OF THE COMMODORE MACHINE'S 40TH ANNIVERSARY, ANDREW FISHER LOOKS BACK AT THE OFTEN-OVERLOOKED FORMAT, ITS IMPORTANT GAMES AND HOW IT KICKSTARTED CAREERS



The story of Commodore's PET begins in 1976 with its predecessor – the KIM-1, a kit computer based around Chuck Peddle's 6502 processor from MOS Technologies. Commodore eventually took over MOS, and Chuck established his vision of a fully-assembled personal computer to Commodore founder Jack Tramiel. Steve Jobs and Steve Wozniak were slowly selling Apple-I kits and dreaming of their next machine and it was Chuck who showed them how to make ROMs work with his processor. That led to an extraordinary meeting where a merger deal between Apple and Commodore was on the table, however it never went through. Meanwhile Radio Shack asked for bidders to create a range of computers to sell in its stores, Commodore went to its offices to show a prototype but the Radio Shack turned it down.

Commodore announced the Personal Electronic Transactor (PET) in January 1977 and the race was on. All three companies appeared at computer fairs during 1977, but the Apple II was first to market in June. The slow process of assembly (five Apple IIs per day, compared to Commodore's 30 PETS) meant both were behind Radio Shack and its TRS-80 computer. The TRS-80, with the rival Zilog Z80 processor, received over 10,000 orders in the first six weeks and 5,500 completed machines by the end of the year. Apple's advertising in 1978 gave the impression that it was the fastest-selling – being first with the disk drive and 'killer app' VisiCalc turned Apple's fortunes around.

Some believe the name PET came from the 'Pet Rock' craze, others think it was the initials of one of Jack Tramiel's relatives. It was originally to be the Personal Electronic Computer, but disliking the acronym PEC Chuck chose the word 'Transactor' instead, some workers at Commodore called it 'Peddle's Ego Trip' instead. The '2001' suffix came from Commodore Japan, which selected a font similar to HAL's keyboard



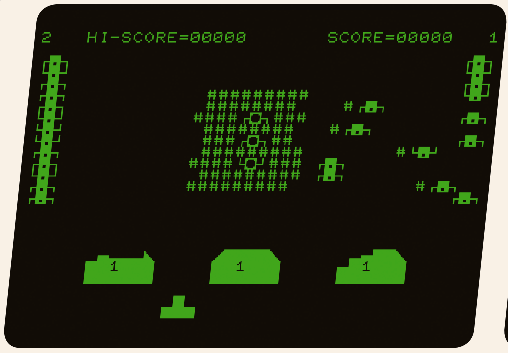
» [PET] Jim Orlando's *PET Panic* recreates classic arcade game *Space Panic*, where monsters must be trapped in holes in the platforms.

in the film *2001: A Space Odyssey* for the keys. Starting a tradition: the graphic characters created by pressing combinations of keys were shown on each key.

One of the earliest PET programmers was Leonard Tramiel, son of Jack Tramiel. He wrote a blackjack simulation shown at trade fairs, and a graphical version of *Lunar Lander* – a popular KIM-1 program. The rounded corners of the prototype PET were replaced by an angular metal case, manufactured by Commodore's filing cabinet division, and its keyboard used calculator-style keys. All the components were integrated in the original PET 2001 – the 69-key keyboard, cassette deck and monitor. Although it had no graphics capabilities, the built-in character set (known as PETSCII, since it enhanced the ASCII standard) was designed to create pictures on screen. Card symbols, lines, shapes, dots and blocks were included. There was no sound and no controller ports in the original PET, features that made the Apple-II better prepared for games.

The 1977 trinity of computers ended up using Microsoft Basic. Commodore negotiated a shrewd deal, paying a fixed fee (some say as low as $10,000)

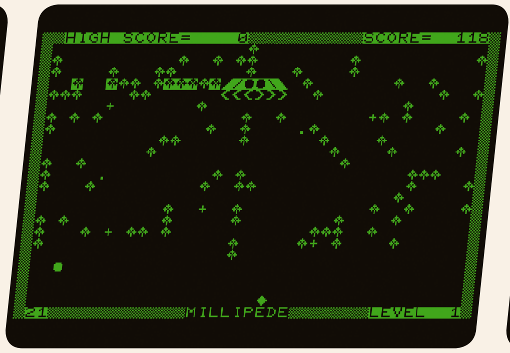
ESSENTIAL PET GAMES



COSMIC JAILBREAK

COMMODORE

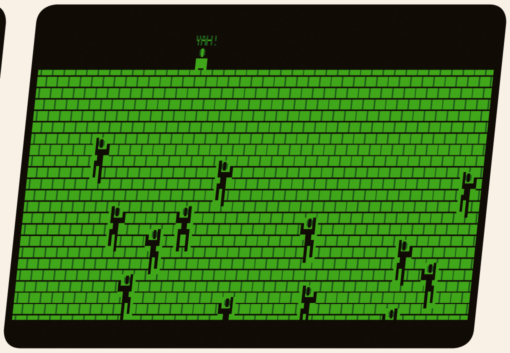
■ Based on the lesser-known Universal arcade game *Cosmic Guerilla*, the aliens pull bricks out of the jail to free the captives, while you defend the jail from the bottom of the screen in a similar way to *Space Invaders*. *Cosmic Jailbreak* kept players captivated, and it was later ported to the VIC-20.



MILIPEDE

ON-LINE SYSTEMS

■ The classic arcade game *Millipede* (which is also known for being Atari's follow-up to *Centipede*) got this fast-moving unofficial conversion, written in machine code, back in 1981. On-Line Systems would go on to be known as Sierra On-Line, more famous for its adventure games.



SEIGE

MIKE SINGLETON/POSTERN

■ Ignore the spelling mistake and concentrate on throwing rocks down at the attackers scaling the castle walls. They will knock each other off with their arms and legs, but it is game over if one reaches the top. it also appears on VIC-20, C64, BBC Micro and Spectrum – additionally, it's inspiration for *Orc Attack*.

instead of royalties to use the language in the PET and modify it for future machines. Apple initially used Integer Basic, but it was unable to use floating point numbers. Apple licensed Microsoft Basic instead, with Bill Gates doubling the fee he got from Commodore. The TRS-80 started out with Tiny Basic, but decided to introduce Microsoft Basic in 1978 – at double the fee Apple had paid. Early commercial titles were written in BASIC, allowing them to be ported between machines. It would take a machine code monitor and assembler to make things easier for programmers.

"I bought a PET with 8K RAM for $800 in April 1978, at The Computer Store in Los Angeles," says Jay Balakrishnan, founder of Human Engineered Software. "The 4K model sold for $600 but I bought the 8K, paying $200 for an extra 4,096 bytes of RAM!" Jay's introduction to programming had been a university course using an IBM 360 mainframe. "There was little information about personal computers anywhere. During the final three years at university, I developed a passion for computer languages and learned programming in 20-plus languages. So by the time I got the PET, I had learned enough to start programming it from day one."

> **"I WROTE LOADS OF OTHER PET GAMES, BUT NONE WAS AS MEMORABLE AS AIR ATTACK"**
>
> *Peter Calver*

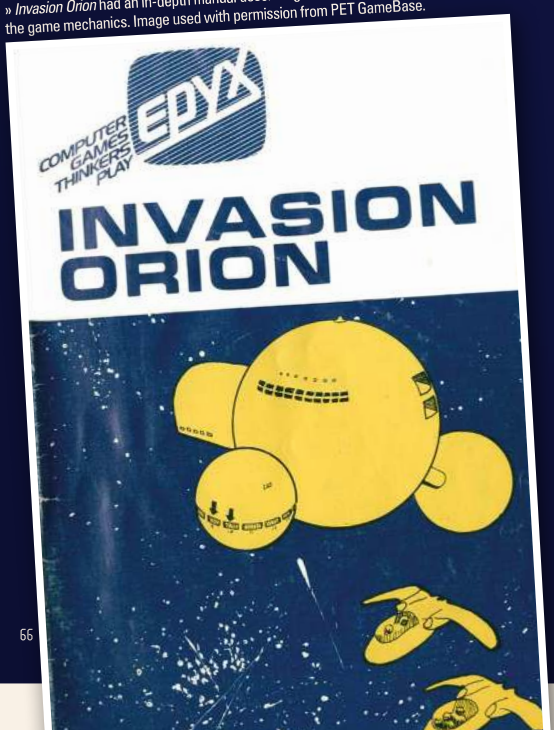
There was no PET 6502 assembler available, so Jay began work on one after he helped Tom Rugg write the first PET book, *32 BASIC Programs for the Commodore PET*. HesBal (Basic Assembler Language) was inspired by an assembler from the IBM mainframe. "When HesBal neared completion, I asked Tom for his critique," Jay says. "He advised that HesBal was good enough to sell commercially. I spent a few more months to program HesEdit, which became the PET's first full-screen editor; HesBal was the world's first 6502 Assembler. I remembered a forgotten promise made to myself – that by 25, I should have my own company. On my 25th birthday, Human Engineered Software (HES) was founded. HES got started selling HesBal and HesEdit together for $16."

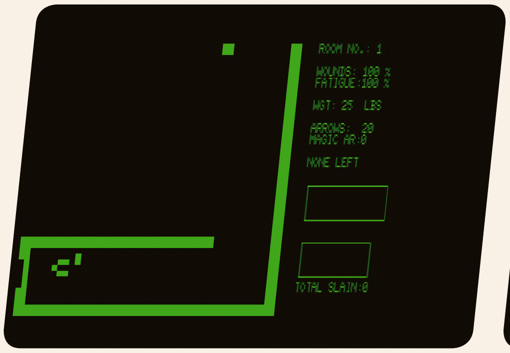
Jay used HesBal to create HesCom – software and hardware to control a communications cable linking the PET and a VIC-20. "[It was] mostly in BASIC, with a small core of fast/tight machine code written using HesBal and HesEdit. Thus HesCom was very fast and sold very well. Also, Terry Peterson used HesBal to create HesMon. HES sold HesMon (a programming/debugging tool for Commodore PET and VIC-20), which was used by numerous other programs." Jay sees the PET as important to his career. "The PET was instrumental in increasing my passion for personal computers and software. [It] set me firmly on the road to entrepreneurship. After starting HES, I founded four other startup companies over the next 13 years."

In early 1978, the PET reached the UK and impressed many eager users. Author Douglas Adams fondly remembered his first encounter, quoted in the posthumous collection *The Salmon Of Doubt*. "It was quite a large pyramid shape, with a screen at the top about the size of a chocolate bar. I prowled around it for a while, fascinated." Jeff Minter began programming games on the PET, first in BASIC and soon in machine code for added speed. Mike Singleton's first commercial games (*Seige*, *Ski*, and *Space Ace*) debuted on the PET. Mike also ran play-by-mail game *Star Lord* using a PET.

"I taught myself BASIC and then learned assembly language," says Peter Calver, founder of Supersoft. "Well, first I wrote an assembler in BASIC. It was hard to get hold of software so I decided I may as well write my own." Peter's earliest computing experience was a DEC mainframe. "In 1978 I saw the PET and other early computers (Apple II and TRS-80) in the Byte Shop in Ilford, and after some months of indecision decided on a PET," he says. They were all very expensive, but I found a dealer in Luton who offered a five per cent discount, bringing my 8K PET down from £695 to a mere £660. Two years earlier I'd bought a three-bedroomed house for £8,500, it was a lot of money for the time. Within less than a week of buying the PET I placed an advert in *Personal Computer World*, and Supersoft was born.

» *Invasion Orion* had an in-depth manual describing the game mechanics. Image used with permission from PET GameBase.

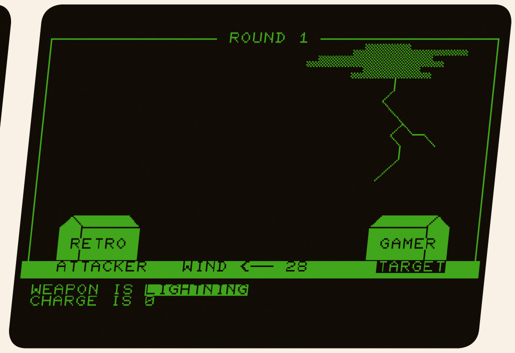




TEMPLE OF APSHAI

AUTOMATED SYSTEMS/EPYX

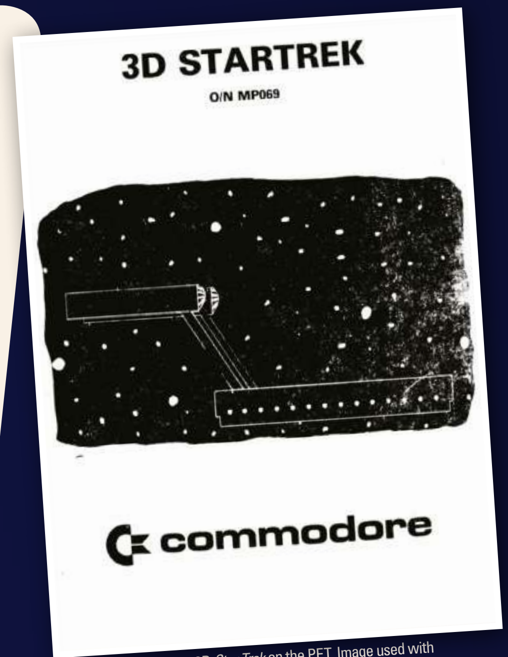
■ Epyx used the *Dunjonquest* engine for a series of role-playing games, and the *Temple Of Apshai* trilogy became the most popular. Room descriptions included in the game's the manual added to the atmosphere. Later conversions for the VIC and C64 added fancier graphics, but the core gameplay remains the same.



OURANOS!

AKA WEATHER WAR, CURSOR

■ Programmed by Kathy Higby and published by *Cursor* magazine, this fun title sees two wizards try to destroy each other's home with weather-based spells. Rain, Hail, Lightning and Tornado can all damage bricks, if the wind is blowing the right way. Random acts of nature add danger to the proceedings.



» The simple manual for 3D *Star Trek* on the PET. Image used with permission from PET GameBase.



» [PET] Leonard Tramiel, the son of Commodore's founder, programmed *Lunar Lander* and *Blackjack* for the machine.

Once I started advertising I was contacted by other authors who wanted me to publish theirs. Most of them were better programmers, so I was delighted."

"I wrote loads of other PET games, but none was as memorable as *Air Attack*," says Peter. What inspired it, a game seen as a forerunner of the *Blitz*/one-button genre? "In the summer of 1979 my brother told me about an arcade game he'd seen called *Canyon Bomber*, which had a plane flying over pillars of rock. Without seeing the game myself (in fact, I only saw it for the first time many years later), I started to program it on the PET based on my brother's description. When I got it working, probably a couple of hours later, I realised that it would be more interesting as a cityscape with skyscrapers." Unusually, the game was printed as a listing in a magazine, with a retail version on tape available from Supersoft (with colour overlays for the screen). Peter adds, "I was both annoyed and flattered when Commodore launched the VIC-20 with *Blitz*. I guess it was my fault for putting the listing in a magazine – then again, I got an enormous amount of publicity from *Personal Computer World* over the years so it was probably worth it."

Just how important was the PET to Peter's career, though? "It was crucially important, because it ▶

PET GAMEBASE

JONBOS AND MAD ARE PRESERVING COMMODORE PET GAMES, AND THEY TOOK THE TIME TO ANSWER SOME QUESTIONS

What makes it important to preserve this history?

__JonBos:__ It is the origins of gaming. Programmers had to be passionate to make games on a PET, and astute.

__Mad:__ The old hardware and magnetic media will not last forever. It also shows just how far computer technology and games have progressed since 1977, when programmers had to make every byte count.

How many games have you preserved?

__J:__ Most of the known ones as only a few are missing. There are also some in German and other languages that were not included as we could not figure them out.

__M:__ The GameBase has 651 entries so far, but there are quite a few non-game programs included. But that's still a high number for a school/business computer.

Is there a 'holy grail' to find?

__J:__ Dungeons Of Death was the one and Mad found it, which was amazing.

__M:__ The Dragon's Eye by Automated Simulations – Southern Software (Epyx). We have a C64 conversion, thanks to it being written in Commodore BASIC. It's hard to find even photographic proof of the original PET cassette. But the game I would most like to be made for PET is Donkey Kong. I love that game!

What can people do to help?

__J:__ Finding the missing Dunjonquest games would be the best.

__M:__ If they know of any games not listed in the GameBase they used to play or own, please send us the file, cassette or any info they can remember so it can be included in any future version.

What are your favourite PET games of all time?

__J:__ The RPG Telengard, and Car Race by Satoru Iwata (Nintendo CEO, 2002-2015). I think it was one of his first games and it is on a PET! The first game I ran on the emulator was Scramble which remains an all-time favourite of mine.

__M:__ Nightmare Park by Bob Chappell, Space Invaders and Night Race. Just recently I was sent Paladin from Kevin Pickell (an ex-EA programmer). Shoot-'em-ups don't get any better in 16K.

What do you make of the new homebrew games?

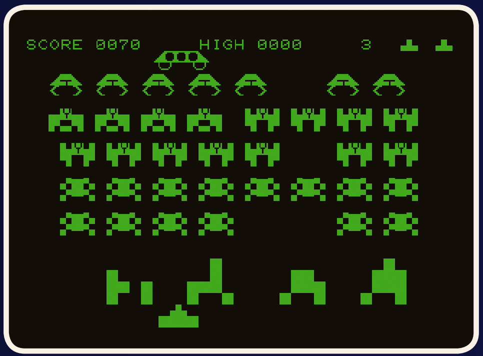
__J:__ It shows the passion in making games and being clever about it. The modern games are breathtaking and show real talent.

"WHEN I BOUGHT THE PET I KNEW I WAS LIKELY TO BE MADE REDUNDANT THE NEXT YEAR"

Peter Calver

wasn't just a games machine or a machine for the home, so there was a market for a wider range of software. When I bought the PET I knew I was likely to be made redundant the following year, so it was a way of providing me with an alternative career option."

In the US, several companies started with a PET. Jim Connelley and Jon Freeman created strategy game *Starfleet Orion* on the PET and set up Automated Solutions to sell it; the company was eventually renamed Epyx. Its sequel *Invasion Orion* allowed the player to load in new scenarios and take on a AI opponent, and included a 'scenario builder' – one of the earliest game construction sets. Both coders were big *Dungeons & Dragons* fans, which led to the creation of the *Dunjonquest* engine. *The Temple Of Apshai* RPG trilogy ran on it, showing action from overhead.

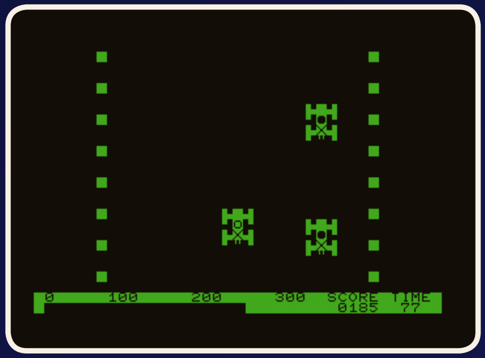


» [PET] *Space Invaders* for the Commodore PET came with instructions on how to build a sound add-on.

Board game manufacturers Avalon Hill formed a software division and released several games for the PET. As well as strategy games such as *B-1 Nuclear Bomber* and *Midway Campaign*, there was hit RPG *Telengard*. The late Daniel Lawrence created the original version on a mainframe and converted it to run on the PET, before porting the game to TRS-80 and Apple-II. It predates the *Dunjonquest* games, and shares many similarities to *Rogue* – however players could visit an inn to save their progress. Avalon Hill saw the game at a convention and signed the licence to distribute the game, coding the popular C64 port in-house. A tie-in with *Sports Illustrated* magazine also led to the creation *Baseball Strategy*. Many of Avalon Hill's games featured multiple versions – often there would be TRS-80, Apple II and PET versions alongside each other.

One of the biggest sources of PET software was *Cursor* magazine, with 30 issues released between 1980 and 1982 by Codeworks. This monthly title came on cassette, featuring a mix of games, animations and utility programs. The Toronto PET User's Group (TPUG) is one of the oldest established computer clubs and put out another important magazine, *The Transactor*. In Japan, the PET User's Club counted Satoru Iwata among its members. His first known computer game was for the PET, in the shape of *Car Race II*.

The PET was well suited to adventure games, particularly the later models with an 80-column screen. It received conversions from the TRS-80 of the early Scott Adams adventures. Scott believes these were created by fans, from the BASIC listings published in *BYTE magazine*.



» [PET] Satoru Iwata created *Car Race II* before becoming an intern at Commodore Japan and then joining HAL Laboratory.

With the Apple-II gaining momentum and the Atari 2600 dominating the early Eighties, PET games began to dry up. Commodore stopped producing the various PET models in 1986, but the machine has lived on in emulation. The PET GameBase has gathered together and preserved many games. There's also a lively homebrew scene.

"We owned a PET about the same time we had a Commodore 64. Most of my PET activities came from spending lunch hours and after school time in the computer room at junior high," says Mike Johnson, known as Mr NOP. "I wanted to create something on a platform that was pretty much unsupported." Mike has programmed *Lady Bug* (based on the Universal arcade game, with its maze of turning gates) and *Oil's Well* (the Sierra On-Line game, based on arcade game *Anteater*). "PET owners are starved for software. Most of the older software and even the newer is written in BASIC. I wanted to create something enjoyable to play in pure machine language." Mike also ported the PET game *Slime* by Jim Summers to the C64.

Martijn Wenting of Revival Studios codes for both the VIC-20 and the PET, but what draws him to the latter? "I like the challenge," he says. "I'm using emulators

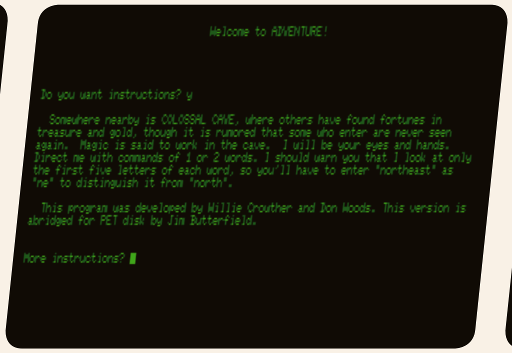
QUESTING ON THE PET



ADVENTURELAND

SCOTT ADAMS

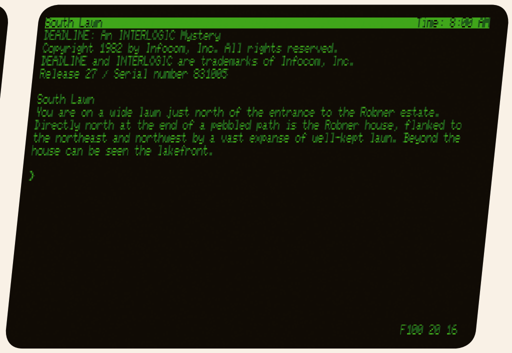
■ Several of the classic Adventure International titles were ported from the TRS-80 to the PET, and would later be converted under licence by Commodore for the VIC-20. This debut adventure featured 13 treasures to find and a score counter, but no other characters to interact with.



COLOSSAL CAVE

JIM BUTTERFIELD

■ The first ever adventure game appeared on mainframe computers, based on Will Crowther's real-life caving experiences and enhanced by his friend Don Woods. It was converted to the PET by renowned Commodore programming expert Jim Butterfield, although it is an abridged version with fewer locations.



DEADLINE

INFOCOM

■ The Z-Machine allowed Infocom to bring its adventures to many different machines back in the Eighties. Other programmers have now ported it to new systems, including the PET. This game sees the player as a detective investigating the murder of a rich man, interrogating suspects and finding clues.

BEST IN SHOW

HOW THE COMMODORE PET SHAPED UP AGAINST ITS RIVALS AT THE TIME

	COMMODORE PET 2001	APPLE-II	RADIO SHACK TRS-80
PROCESSOR	6502 @ 1 MHz	6502 @ 1 MHz	Z80 @ 1.77 MHz
MEMORY	4K or 8K (expandable to 32K)	4K (expandable to 64K)	4K (expandable to 48K)
COLOURS	Monochrome	16	Monochrome
GRAPHICS	Built-in graphics characters (40x25, effectively 160x100 pixels)	Lo-res 40x48 pixels (16 colours) / hi-res 280x192 pixels (six colours)	128x48 pixels
SOUND	None (beeper can be added)	Beeper	Beeper
CONTROL PORTS	None	Internal (for paddles)	None
LAUNCH PRICE	$595 with built-in monitor and tape deck ($2,400 in 2017 prices)	$1298 without monitor or tape deck ($5,235 in 2017 prices)	$600 with black-and-white display, tape deck extra ($2,420 in 2017 prices)
LIFETIME SALES (ACROSS ALL MODELS)	600,000	5 million	200,000

throughout the development. However I recommend any developer to also test on the real hardware."

Martijn has created seven PET games, transferring the gameplay from his other homebrew titles – although *Boxing Champ* started life on the PET before being ported to the ZX81. "I like using the PETSCII set as I think it gives the games that PET charm and style. I think there is no limit to what can be achieved if you are creative – for example, my game *Rush* uses parallax scrolling backgrounds." He has more games planned. "I'm looking to convert Videopac game *Cavity* to the system and I have a prototype for a working CHIP8 emulator, which will allow for a number of CHIP8 games and demos to run on the trusty old PET."

Jason Kelk coded *Blok Copy* for the PET. "There are bits and pieces for a few more games lurking among my files in various states, including a proof-of-concept hardware scroll that relies on later models of PET," he says. The original *Blok Copy* used coloured tiles, so how well did it transfer? "I talked Doug 'Bizzmo' Roberts into spending some time making distinct tiles for the PET. It wasn't easy getting something we were both happy with, but the final result works better than my own first attempts!" We were keen to hear what drew Jason to the PET. "The hardware restrictions looked like an interesting challenge and having a 6502 processor gave me a head start," he replies.

Mike has one final thought. "I know that programming is about enjoyment and having fun, but to me it's like composing a song nobody will hear or writing a book nobody will read – there needs to be an audience. Vinyl records and cassette tapes are making a comeback, so the PET could become popular again."

The PET may not have had the memorable games of its rivals or the Atari 2600 console, but it still has a dedicated community enjoying the challenge of working within the machine's limitations. *

Thanks to our interviewees for taking part and Kieren Hawken for his help.



FUN & GAMES

Air attack

by Peter Calver

A plane crosses the screen from left to right, passing over 'New York' and moving one line lower after each crossing. The plane has an inexhaustable supply of bombs, which are dropped by pressing the space key — however, there is a constraint in that a bomb may not be dropped until the previous bomb has exploded. This puts a high premium on accuracy. The object of the game is to demolish all of the 'buildings' by dropping bombs so that the plane can be brought in to land at ground level — which at first will seem impossible! The game ends when the plane hits a building — so to prolong the game and get a high score you must aim for the highest buildings. If you do succeed in landing the plane — and it's only been done once to my knowledge — the game restarts with your score carried over.

LISTINGS

If you have a PET with the new ROM, change PEEK(547) at line 370 to PEEK(166). An enhanced version of AIR ATTACK is available on cassette from SUPERSOFT at 28 Burwood Avenue, Eastcote, Pinner, Middlesex at a special price of £3 post free. This includes a four-coloured overlay which colours the buildings in layers thus adding a new dimension to PET games.

» *Personal Computer World* published the PET BASIC listing of Peter Calver's *Air Attack*. Advert used with permission from Peter Calver.

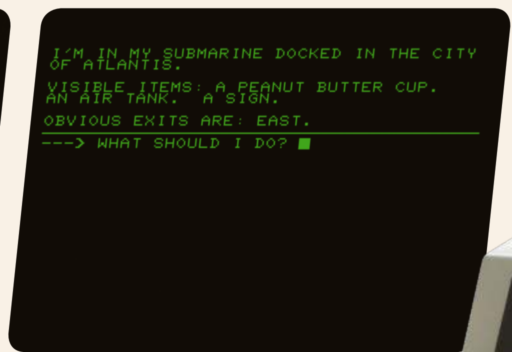
COMMODORE'S MACHINE PLAYED HOST TO A NUMBER OF GOOD ADVENTURE GAMES



DOG STAR ADVENTURE

LANCE MICKLUS

■ The arrival of *Star Wars* in 1977 influenced an unquantifiable bunch of programmers. Lance Micklus wrote *Dog Star Adventure* for the TRS-80, changing character names to avoid copyright. This later PET version restored the original names and added a PETSCII title picture of Darth Vader.



VOYAGE TO ATLANTIS

JOHN O' HARE/MAD HATTER

■ Greg Hassett created several early text adventures, with John O'Hare the programmer responsible for porting them to the PET. *Atlantis* charged players with relocating a bunch of treasure from the titular lost city into a submarine.





Mega Man X

WHY I LOVE CAPCOM'S SUPERCHARGED SPINOFF



» **SNES**
» **CAPCOM** » **1993**

While I love hard games, I always felt that the original NES *Mega Man* games took the proverbial biscuit. I'm never one to shy away from a challenge in my games, but I always used to find the *Mega Man* games too hard for their own good. I'm clearly in the minority when you consider how much love there is online for those earlier releases, but it's something I've come to peace with. You can't like everything after all.

When Capcom rebooted the series for the 16-bit era, I was instantly interested and excitedly picked up a copy of *Rockman X* (as it was known in Japan) as soon as it was released. It was expensive, costing me around £70 at the time of release, but it was *so* much fun to play compared to those earlier NES games. New protagonist X was far more mobile than his NES counterpart and could cling to and jump off walls, as well as dash across the ground or while in midair, which enabled him to get out of all sorts of jams. While he could earn new weapons from defeated bosses, numerous parts of him could be upgraded too, which further added to his flexibility.

The level design of *Mega Man X* was generally stronger than those earlier NES games as well, making full use of your abilities and ensuring that your reactions received a more than suitable workout during play. It was still tough, but never frustratingly so. The many bosses of *Mega Man X* were also well designed and remain some of my favourite from the series (Chill Penguin is a particular favourite as you might guess). Add in some astonishing looking visuals – Capcom's games always shone on Nintendo's 16-bit system – and *Mega Man X* really was something special. I wonder how much it's selling for online at the moment… *



MSX

THE BEST OF THE WEST

Microsoft's attempt at creating a standardised 8-bit microcomputer might have experienced its greatest success in Japan, but Western developers held up their end of the bargain too, as these 20 hits prove...

Temptations

■ GENRE: **Platformer** ■ YEAR: **1988**
■ DEVELOPER: **Topo Soft**

MONK MAGIC

Five reasons to have faith in this lesser-known platform classic

The MSX was a popular machine in Spain, and the local software industry was experiencing a golden age during the 8-bit era. As a result, many of the best Western exclusives for the format originate from Spain, and *Temptations* is just one of them. You play as an old monk who must battle through four levels full of monsters, shooting away the evil with arrows and other weapons. It's not a tremendously innovative game, but the production values are very high and the game design still holds up very well today.

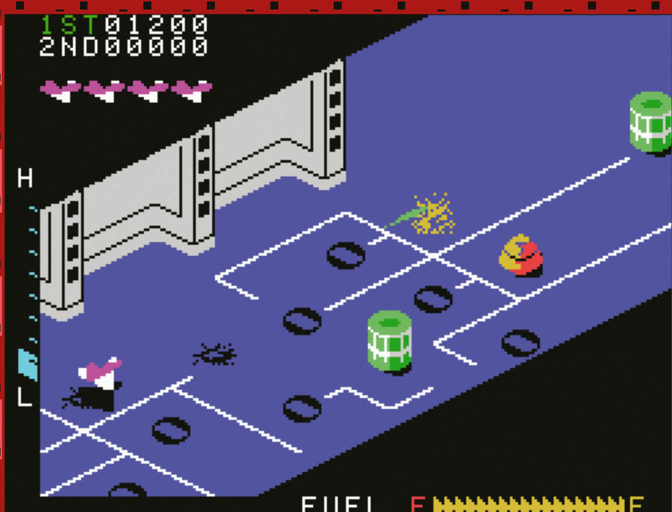
Like many 8-bit games, **IT'S A REAL CHALLENGE** – don't expect to clear level one on your first try, let alone the whole game.

Weapon power-ups are joined by **PHYSICAL TRANSFORMATIONS**, including wings for flight and a fish form for your monk.

COLOURFUL GRAPHICS with a lack of attribute clash, showing off the hardware's graphical capabilities.

The game's four levels offer **VARIED ENVIRONMENTS**, including churchyards, dense forests and even underwater sections.

EXCELLENT LEVEL DESIGN means that your goal is obvious, and you'll only be let down by your own skill.

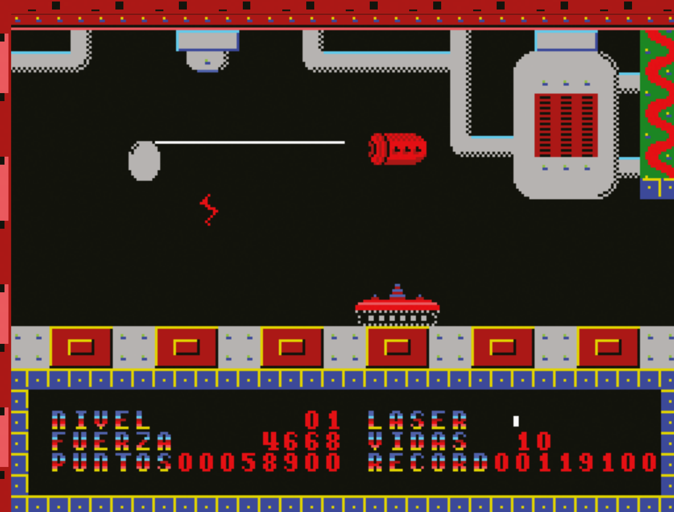


Zaxxon

■ DEVELOPER: **Electric Software** ■ GENRE: **Shoot-'em-up** ■ YEAR: **1985**

The MSX shares very similar hardware with a number of systems, and although they're not cross-compatible, porting between them is very easy. One such system is the ColecoVision, and this excellent version of *Zaxxon* originated on that console in 1983. The short-lived publisher Electric Software released this conversion a couple of years later, and it's basically indistinguishable from the console original, but with the advantage of not having to use the uncomfortable ColecoVision control pads.

As a popular game worldwide, *Zaxxon* actually ended up with two MSX conversions. This European cassette version compares very well to the MSX cartridge version of *Zaxxon*, developed by Pony Canyon and released in Japan and other markets in 1985. Both play well, but the Western version can boast of faster scrolling and slightly cleaner visuals.



The Last Mission

■ DEVELOPER: **Opera Soft** ■ GENRE: **Shoot-'em-up** ■ YEAR: **1987**

Here's an innovative design from the Spanish software house Opera Soft – a sci-fi shoot-'em-up in which you control a two-part tank. The gun turret can detach itself from the treads and fly around independently, allowing you a much easier time blasting the many baddies on each screen. However, that's not the only reason to do it – you only lose a life if your turret is destroyed, so a timely detachment from the treads can save your skin.

Better yet, the game's level design actively requires you to head off with the turret independently, leaving your ground-based unit behind. It's possible to find your progress blocked by a wall that can only be destroyed from behind, necessitating you to find another way around with the turret in order to destroy the barrier and regroup. It's not an easy game by any means, but those of you with incredible skills or extraordinary perseverance will find a lot to enjoy here.

MSX SPECTRUM

Thanks to its Z80 CPU, the MSX was easily capable of hosting ZX Spectrum conversions – here are four of the best

Head Over Heels

■ DEVELOPER: **Ocean Software**
■ GENRE: **Isometric Platformer** ■ YEAR: **1987**



The classic isometric platform game by Jon Ritman and Bernie Drummond was great on every other format, so it's no surprise that it's great on the MSX too. It looks just like the Speccy version, and plays equally well.

Knight Lore

■ DEVELOPER: **Ultimate Play The Game**
■ GENRE: **Isometric Platformer** ■ YEAR: **1985**



You can't mention isometric platformers without including Sabreman's best adventure, especially since the 'Filmation' technique used to great effect on the Spectrum survived the conversion intact. There's also a Japanese cartridge version, released by Jaleco.

Pac-Mania

■ DEVELOPER: **Grandslam Entertainment**
■ GENRE: **Maze** ■ YEAR: **1988**



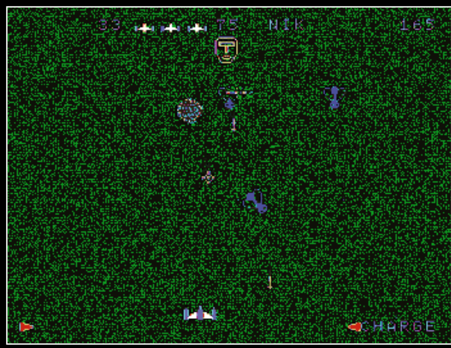
This conversion of Namco's arcade hit made good use of colour while minimising attribute clash, and thus holds up very well. It's also the only way to play *Pac-Mania* on an original MSX, since the Japanese cartridge is an MSX2 game.

WEC Le Mans

■ DEVELOPER: **Imagine Software**
■ GENRE: **Racing** ■ YEAR: **1988**



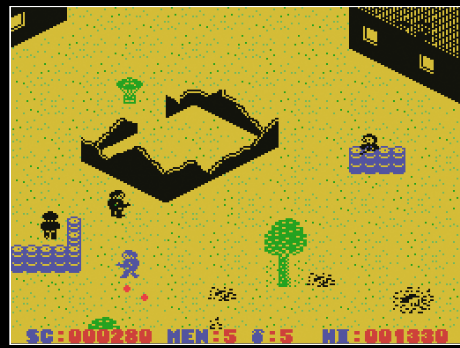
Your engine might sound like an angry wasp in a jar, but this is still a good version of Konami's arcade racer. It runs relatively fast and smooth for the 8-bit hardware, and the rendering of inclines and curves is still impressive.



Valkyr

■ DEVELOPER: **Gremlin Graphics**
■ GENRE: **Shoot-'em-up** ■ YEAR: **1985**

Colin Dooley's MSX debut looks pretty basic, sure, but it's an interesting take on classic arcade shooters such as *Galaga*. Instead of enemies breaking formation, they're free-flying nightmares that swarm around the screen, with a UFO hovering at the top of the screen to pelt you with fire when hit. Downed enemies release plasma which charges a bomb that will blow up the ominous masked face at the top of the screen – but only if you can charge it up it in the time limit. It's a pretty novel idea for a shoot-'em-up, and one that ensures that you're always, literally, shooting for a goal.



Who Dares Wins II

■ DEVELOPER: **Alligata Software**
■ GENRE: **Shoot-'em-up** ■ YEAR: **1986**

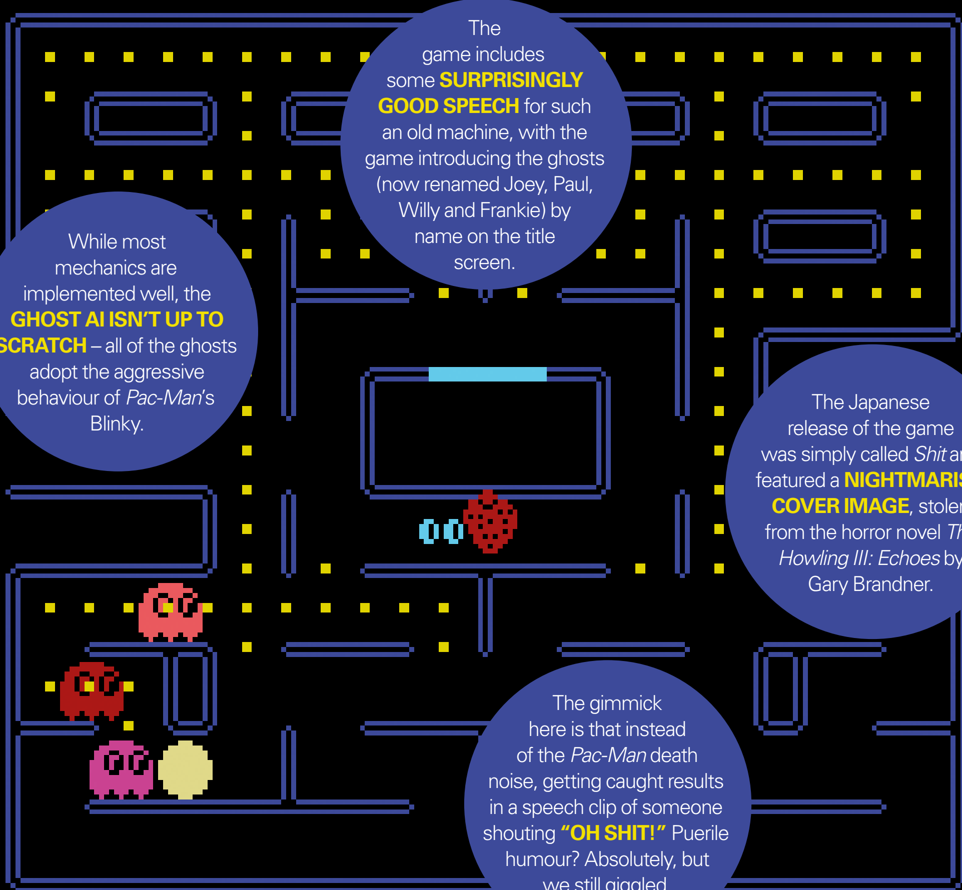


At first glance, this conversion of the *Commando*-inspired game looks much like a straight Spectrum port. However, this version actually takes good advantage of the MSX hardware to completely eliminate attribute clash, and it displays some added colour to boot. It's not the most original game in the world, but with some good level design and responsive controls, it makes for a very worthwhile addition to the MSX library.

Oh Shit! ■ DEVELOPER: **Aackosoft** ■ GENRE: **Maze** ■ YEAR: **1985**

EXPLETIVE DELETED

This scatologically-named game is a completely shameless Pac-Man clone, but bears some unusual features. Let's find out what they are…



The game includes some **SURPRISINGLY GOOD SPEECH** for such an old machine, with the game introducing the ghosts (now renamed Joey, Paul, Willy and Frankie) by name on the title screen.

While most mechanics are implemented well, the **GHOST AI ISN'T UP TO SCRATCH** – all of the ghosts adopt the aggressive behaviour of *Pac-Man*'s Blinky.

The Japanese release of the game was simply called *Shit* and featured a **NIGHTMARISH COVER IMAGE**, stolen from the horror novel *The Howling III: Echoes* by Gary Brandner.

The gimmick here is that instead of the *Pac-Man* death noise, getting caught results in a speech clip of someone shouting **"OH SHIT!"** Puerile humour? Absolutely, but we still giggled.

Goody

■ GENRE: **Platformer** ■ YEAR: **1987**
■ DEVELOPER: **Opera Soft**

STEALING OUR HEARTS

How Opera Soft's platformer stood out from its competitors

If you've ever wanted to pull off an 8-bit heist, *Goody* could be one of the best ways to do that. As a veteran thief, your job is to bust into the vaults of the Bank Of Spain in order to do some major crimes. Of course, in order to do this you'll need to discover the access code, which means bargaining with some of the riches you acquire along the way. You've also got to contend with strange enemies, including snakes and even the moon.

Apart from being a well-constructed platform adventure, what makes *Goody* stand out from the crowd is its great use of the MSX hardware. Each of the game's many screens is packed with colour and the graphical style is reminiscent of early Japanese console games – *Goody* wouldn't have looked out of place on the SG-1000 or Famicom. The popularity of the game saw it converted to MSX2 in 1988, allowing for even better visuals, and the game has lived on through fan remakes and an isometric sequel on mobile phones.



Desolator

■ DEVELOPER: **Gremlin Graphics** ■ GENRE: **Shoot-'em-up** ■ YEAR: **1986**

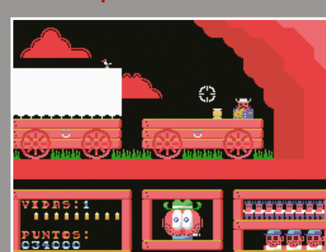
Every Eighties system worth its salt had to have a decent take on the arcade hit *Defender*, and on the MSX that take came from Colin Dooley, making *Desolator* one of the very few MSX exclusives of note to have originated from the UK. It's quite a lot like its arcade inspiration, but without the need to rescue people. Instead, everything is focused on the blasting action. You might think that would make the game easier, but of course there was nothing easy about the original belt-scrolling shooter, and this game inherits that difficulty.

What makes *Desolator* noteworthy is its technical excellence. The game runs at an impressive speed, and the scrolling doesn't suffer at all. That all this is achieved with multiple on-screen enemies and a fully functioning minimap is quite impressive. The explosion effects on enemy craft add some spice, but when you bite the bullet yourself it's quite spectacular – almost impressive enough to alleviate your irritation at having been killed in the first place.



Colt 36

■ DEVELOPER: **Topo Soft** ■ GENRE: **Shoot-'em-up** ■ YEAR: **1987**



It's surprising to see this kind of shoot-'em-up on the MSX, given the lack of support for a lightgun, but Topo Soft makes it work rather well. The Western-themed shooting gallery is a test of memory and reactions, as enemies pop up from predetermined locations before taking shots at you. They won't miss, so your only hope is to take them out first – but that's not easy due to a slow cursor and a vertically scrolling screen. Thanks to its status as an exclusive, *Colt 36* uses the graphical capabilities of the MSX well, using lots of colour while still featuring well-defined sprites.

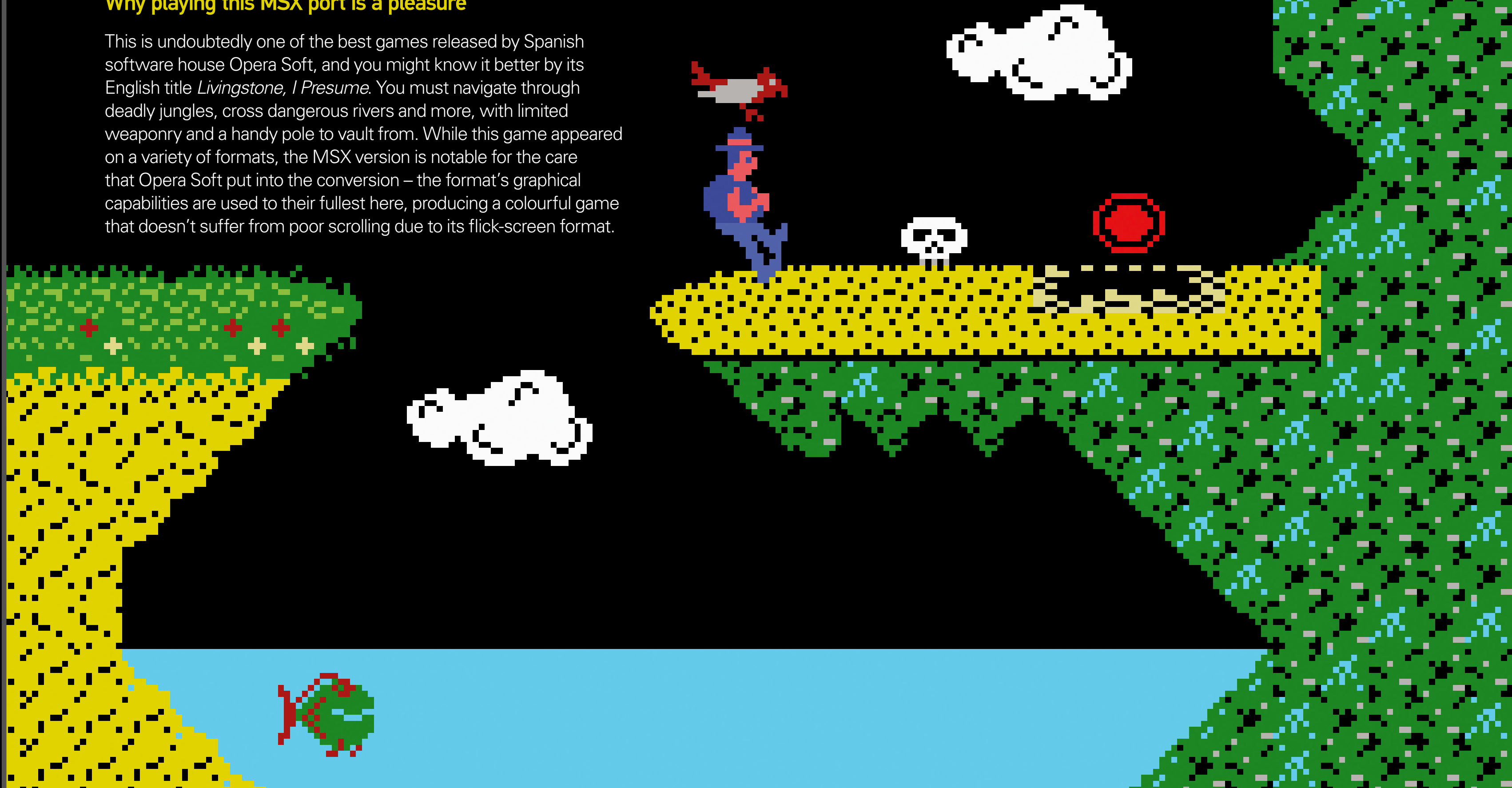
Livingstone Supongo

■ DEVELOPER: **Opera Soft** ■ GENRE: **Platformer** ■ YEAR: **1986**

A GOOD CONVERSION, I PRESUME…

Why playing this MSX port is a pleasure

This is undoubtedly one of the best games released by Spanish software house Opera Soft, and you might know it better by its English title *Livingstone, I Presume*. You must navigate through deadly jungles, cross dangerous rivers and more, with limited weaponry and a handy pole to vault from. While this game appeared on a variety of formats, the MSX version is notable for the care that Opera Soft put into the conversion – the format's graphical capabilities are used to their fullest here, producing a colourful game that doesn't suffer from poor scrolling due to its flick-screen format.





Space Walk

■ DEVELOPER: **Mastertronic** ■ GENRE: **Shoot-'em-up** ■ YEAR: **1985**

Some of Ultimate's games made their way to the MSX, but *Jetpac* sadly wasn't one of them. Thankfully, this effort from Mastertronic goes some way to making up for that absence, offering similar gameplay. Your goal is to grab a floating satellite object and bring it back to your spacecraft, all while avoiding or blasting asteroids and rival spacemen. Unlike *Jetpac*, there are no platforms to rest on and if your target object reaches the planet's surface, you'll end up losing a life. It's not quite as smooth as its inspiration, but *Space Walk* will keep you busy for a while all the same.



Lazy Jones

■ DEVELOPER: **Terminal Software**
■ GENRE: **Minigame Compilation** ■ YEAR: **1985**

Also appearing on other formats, the MSX version of *Lazy Jones* is a well-presented conversion that stands out for its then-unusual premise of offering a variety of minigames for a lazy hotel caretaker to enjoy. These are usually small arcade-style games that offer a take on the hits of the day, like the magnificently-named 'Eggie Chuck', though there are more unusual games such as 'The Bar' to enjoy too. The conversion is tailor-made for the MSX, which is always greatly appreciated.



Master Of The Lamps

■ DEVELOPER: **Activision**
■ GENRE: **Music** ■ YEAR: **1985**

This early entry in the music game genre is often forgotten, which is a great shame. As well as being of historic importance, the game sports a unique Arabian-inspired look and seriously trippy visuals. As a prince, your goal is to contain three genies that were released upon the death of the king. In order to do that, you need to fly between lairs on your magic carpet (shown with a cool pseudo-3D flight sequence), then complete musical call-and-response challenges to win lamp fragments. With enough fragments, a full lamp can be assembled to capture a genie. If you're looking to play something a little different, check this game out.



Trail

■ DEVELOPER: **Kotai**
■ GENRE: **Racing** ■ YEAR: **1989**

This dirt bike racing game from a young and talented MSX fan shows just how far MSX-BASIC could be pushed. Playing something like a flick-screen take on *Excitebike*, *Trail* allows one or two players to compete to get as far as possible. Complicating this goal, you'll face obstacles like ramps, walls and water. It's an extremely attractive game in still shots, and even the slow movement of onscreen objects can't quite defeat the initial effect. However, what's really great about *Trail* is the awesome piece of music that continues throughout the game – it truly shows what could be achieved with PSG sound in the right hands.



Hunchback

■ DEVELOPER: **Ocean Software**
■ GENRE: **Platformer** ■ YEAR: **1984**



The challenge of *Hunchback* is a simple one, but it is one that'll keep you playing – leaping over the soldiers to ring the bell isn't easy, but you're always *so* close that failure doesn't discourage you. As one of the earliest games on the list it's not stretching the hardware, but this arcade conversion does come up looking pretty attractive thanks to some large sprites and good use of colour, made possible by the TMS9918 graphics chip.

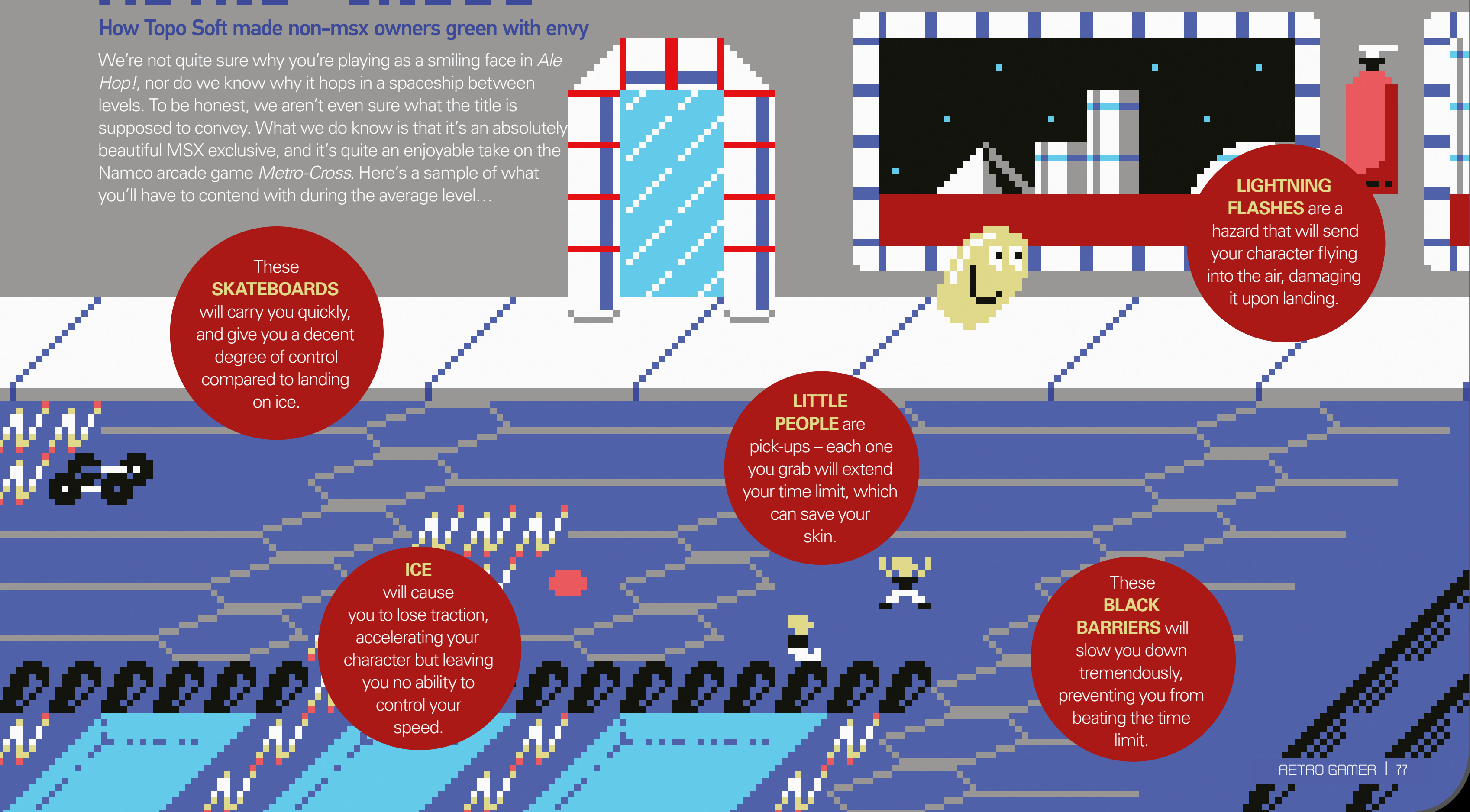
Ale Hop!

■ DEVELOPER: **Topo Soft** ■ GENRE: **Platformer** ■ YEAR: **1988**

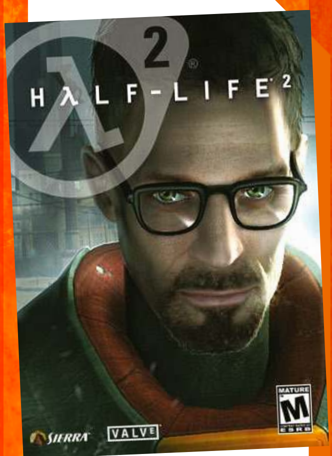
ASTRO CROSS

How Topo Soft made non-msx owners green with envy

We're not quite sure why you're playing as a smiling face in *Ale Hop!*, nor do we know why it hops in a spaceship between levels. To be honest, we aren't even sure what the title is supposed to convey. What we do know is that it's an absolutely beautiful MSX exclusive, and it's quite an enjoyable take on the Namco arcade game *Metro-Cross*. Here's a sample of what you'll have to contend with during the average level…



THE MλKING OF HλLF-



IN THE KNOW

- » **PUBLISHER:** VALVE
- » **DEVELOPER:** VALVE
- » **RELEASED:** 2004
- » **PLATFORM:** PC, VARIOUS
- » **GENRE:** FIRST-PERSON SHOOTER

The impact that the original *Half-Life* had on videogames was remarkable, but you could argue that its sequel represents an even greater achievement. To revolutionise a genre once – with radical new approaches to structure, storytelling, and gameplay that would influence an entire industry – is hard enough. To do it *again* with the sequel is staggering.

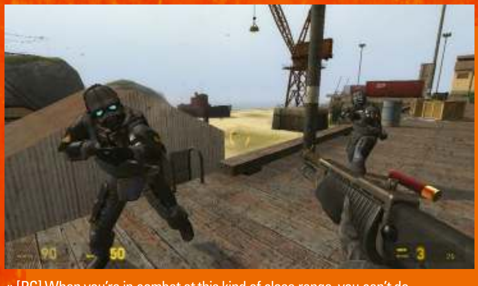
Early planning for *Half-Life 2* didn't go as smoothly as the team would have liked. "In retrospect, it's funny how much we overreached ourselves at this point," *Half-Life 2* programmer and cabal lead David Speyrer tells us. It all started with a list of improvements the team wanted to make after shipping the original *Half-Life*. "For example," David says, "it was cool that characters acted out scenes around the player, but their mouths moved in a simple puppet way. The player could push crates and barrels, but they wouldn't tumble realistically." Advances in CPUs and GPUs meant that things like realistic facial animation and physics were becoming possible, so the team began by thinking about "these technical opportunities and talking through the impact they might have on the player experience", as David puts it. "At the same time, we met as a team to start developing an outline of the moment-to-moment beats of the game," he continues. "We developed the story and gameplay all the same time, which turned out to be a terrible approach. It was probably 'second album syndrome' caused by the success of *Half-Life*, but the scope became huge and designing around a bunch of unproven mechanics was a silly mistake."

The bloated and overly-ambitious design that emerged out of this early process points to some intriguing possibilities as to what *Half-Life 2* could have become. "We designed three different alien races and settings as far-flung as Chicago, an Arctic base, Cairo, and a Prague-like alien city," David reveals. The concept of an Eastern European-inspired city did survive – more on that later – but most of the ideas from this early incarnation of the game were canned, though some were prototyped and playtested. "We built a firefighting system in which the player would get a fire extinguisher and could run around putting out fires on an Arctic research vessel," says David, offering an example. "The fire would spread across surfaces and limit the player's access to parts of the level or ignite flammable barrels. It was interesting, but ultimately we cut the mechanic because it didn't generate enough unique scenarios and there were other more promising things to work on." Incidentally, a ship called the Borealis is discovered in an Artic location in *Half-Life 2*'s follow-up episodes, so it seems the idea of an Artic location was not entirely forgotten and we likely would have gotten to visit it had the never released *Half-Life 2: Episode 3* somehow seen the light of day.

The team soon realised that its globetrotting vision for *Half-Life 2* had to be cut back dramatically. Nevertheless, it is worth remembering that the game was still a huge step forward when it came to its realism and world building, giving us a place to explore that set a new standard for videogames to come. One of the people that played an important part in creating that world was art director Viktor Antonov. "The same time that *Half-Life* shipped, I had just shipped *Kingpin* and it had a very detailed urban environment," Viktor tells us. "I think one of



» [PC] "I put my trousers on, have a cup of tea and I think about leaving the house. *Half-Life*."



» [PC] When you're in combat at this kind of close range, you can't do better than a shotgun.

-LIFE 2

PλUL WλLKER-EMIG SPEλKS TO VλLVE'S DλVID SPEYRER λND VλLVE λLUMNI VIKTOR λNTONOV TO FIND OUT HOW THE HλLF-LIFE TEλM CREλTED ITS CLλSSIC SEQUEL



» [PC] It's inevitable that you end up at the Citadel that towers over City 17.



the reasons Valve contacted me was because of *Kingpin*'s push for realism and expansive scope and space. Most games at the time were put in bunkers. I had always fantasised about creating a world that's closer to reality and that recreates a city, something that feels like you arrive somewhere, at an airport, and you're in a real place," he continues. "I think my biggest contribution to this project was, with my coworkers, to pull it out of the bunkers and create a realistic world."

The world Viktor is talking about is *Half-Life 2*'s iconic City 17. "Eastern Europe for me was completely unexplored," Viktor says regarding the city's inspirations, describing it as a blend of Sofia, Belgrade, and St Petersburg. "Not many people would tap into the treasure of contrast that is Central and Eastern Europe, crazy treasures that I happen to know of because I grew up there," says Viktor, who was born in Bulgaria. City 17 wasn't just based on Viktor's own personal experience, of course. He tells us that a lot of work went into making it feel as real as it does. "Absolutely everything was researched to a degree of, I'd say, madness. I had sent photographers and went myself to go on rooftops, go into cellars, to observe the architecture, the courtyards. There was a lot of groundwork researching that something made sense structurally, because the city is laid out the way Central European cities are laid out," he explains. "It has a grid pattern, then some diagonal streets, and then courtyards, unlike the US where you only have alleyways and blocks. These courtyards happen to become fight areas that were very important for the game."

Half-Life 2's Eastern European setting is particularly apt given that it is set in a world that ▶

KEY CHARACTERS



THE G-MAN

■ The mysterious entity awakens Gordon Freeman from his time in stasis at the beginning of *Half-Life 2*. As always, his motives are unclear, but he seems to want you to take down the Combine.



ALYX VANCE

■ A likable companion, proficient fighter, and skilled hacker, Alyx is always welcome when she turns up to fight alongside you. The G-Man shows an interest in her in *Half-Life 2*'s follow up episodes that's yet to be explained.



BARNEY CALHOUN

■ Poor Barney died many times over in the original *Half-Life* with his model being used for every security guard. In *Half-Life 2* he is a resistance fighter who has gone undercover, posing as a Combine soldier.

DEVELOPER HIGHLIGHTS



HALF-LIFE
SYSTEM: VARIOUS
YEAR: 1998

THE ORANGE BOX
SYSTEM: PC, VARIOUS
YEAR: 2007

PORTAL 2 (PICTURED)
SYSTEM: PC
YEAR: 2011

"WE WANTED THE GAME'S PHYSICS TO MATTER TO HOW IT PLAYED"
DAVID SPEYRER

▶ is occupied by an invading force in the alien Combine, deliberately playing off Eastern Europe's history of occupation, from the days of the Ottoman Empire, to the Austro-Hungarian Empire, and the Communist Eastern Bloc. "If you think of a fictional place like *Blade Runner*'s city, Syd Mead had created layers of hundreds of years of history," says Viktor. "You could see the older buildings, how they had decayed, how newer technology had been integrated. For *Half-Life 2* I tried to use the same technique to rewrite history backwards," he continues. "We have some buildings from the 19th century, there was a different period and this invader came and left traces, and then the aliens came and they left their mark. It was a city with layers of invasion culminating in something very hostile and very alien." Indeed, the harsh geometric design of the Combine's architecture and technology viscously contrasts with and aggressively tears into the old city. "That," says Viktor, "is the sign of occupation."

Gameplay considerations were as important as realism and Valve ensured is got that aspect right when it came to designing the city. The game is masterful at directing you down the correct path, which helps to obscure the fact that its spaces are far more linear than they feel. The team started by using composition – "streets, avenues, perspectives, and the empty spaces between buildings", in Viktor's words – to push you down a desired path and then used playtesting to refine it. David explains that they watched for the "cues they saw and what they didn't see" and followed up by asking playtesters about their thought process when they choose a particular route. Once the team had a theory about what went wrong, they would



» [PC] Defeat this boss and you are rewarded with the ability to control the Antlions that have been pestering you while you've been travelling along the coast.

THE HEROES AND VILLAINS GORDON ENCOUNTERS



ELI VANCE

■ Alyx's father was a scientist at Black Mesa during the events of the first *Half-Life* and is now leader of the resistance. He is highly respected by your alien allies, the Vortigaunts.



WALLACE BREEN

■ The former head of Black Mesa sold out humanity, negotiating their enslavement and becoming the Combine's puppet, overseeing City 17 as 'the Administrator'. Needless to say, he wants Gordon dead.



JUDITH MOSSMAN

■ Dr Mossman doesn't get on well with Alyx, but she is an important figure in the resistance fighting against the Combine regime. She has an important role to play in *Half-Life 2*'s plot too.

add something to address it: a tweak to the lighting ("players tend to follow the most well-lit path"), a landmark that provides you with a reference point, a flock of birds taking flight to draw your attention upwards, or an interactive element – "on the rooftops after the Metro Cops roust the tenements, there are a just a few buckets placed strategically on the roofline and players instinctively run toward them," says David, providing an example.

The care, craft and commitment to realism behind *Half-Life 2*'s architecture is also evident in its atmosphere. Lighting plays an important role in that. "The angle of the sun was at the month of September in Northern or Central Europe," says Viktor. "It is always at 45 degrees, it never goes higher, which provides you with very long cast shadows." Setting the game during "a beautiful autumn in September", with soft light and long shadows was intended to create a sense of nostalgia and familiarity. That's partly about giving the player something they can relate to, increasing the impact of encountering the alien elements they're *not* familiar with, Viktor tells us. However, it's also about providing an important point of contrast to what you are doing in the game. "If you're going to have a horror situation or something intense, rather than making everything gloomy and dark and sinister, it would be better to create a romantic, beautiful atmosphere, and then the shock is much bigger when something scary happens." That's why, instead of portraying a hostile Eastern Europe at Winter with grey factories and bleak landscapes, as they could have done, the team opted for romance and beauty as the backdrop for *Half-Life 2*'s tragic world.

Atmosphere, realism, and worldbuilding are far from the only things that made *Half-Life 2* stand out. It was packed full of innovative ideas, constantly introducing new mechanics, themes, and methods of play. Perhaps most notable is the



» [PC] Ted takes a moment to relax after being flung around in the Danger Ted Construction Set, a tool used to experiment with *Half-Life 2*'s physics.

game's landmark use of a realistic physics system, highlighted by puzzles that take things like object weight and buoyancy into consideration, vehicle sections and, of course, the Gravity Gun, a weapon that allows you to pick up objects and fire them towards your enemies. "We wanted physics to matter to the gameplay although we weren't sure what form that would take," David replies when we ask why so much focus was placed on physics. "We had licensed the Ipion physics libraries, but that was just the starting point. Software engineer Jay Stelly spent several years working from the low-level solver all the way up through our highest-level game code, and the result was that the game's physics had this great solidity and meaningful implications to the game's mechanics. As the physics feature set expanded, everyone tried to see what they could do with it. Level designers built crazy diabolical physics traps and contraptions, and Jay had to figure out how to make it all work!"

David tells us that the Gravity Gun was a tool at first, developed by Jay to let you pick objects up and reel them in or push them away with an energy beam controlled by the mouse wheel. He christened it the Physgun. "At some point we came up with the idea of assembling physics contraptions by welding objects together and that functionality was added to the Physgun," David recalls. ▶

THE SEQUELS



Half-Life 2 was followed up by what was originally planned as a trilogy of downloadable episodic releases. Sadly, only *Half-Life 2: Episode One* and *Half-Life 2: Episode Two* were released, leaving us with a cliffhanger that has never been resolved. The episodes follow on from the events of *Half-Life 2* to tell the story of the conflict between the resistance and the Combine, introducing new enemies, like the Hunter, and new mechanics to play with.

HIGHLIGHTS

THE DEFINING MOMENTS FROM VALVE'S SEMINAL SHOOTER



WAKE UP, MR FREEMAN

■ *Half-Life 2* begins with you arriving in City 17 in a scene which mirrors *Half-Life*'s iconic monorail introduction. It paints a vivid picture of a totalitarian future through subtle interactions.



ON THE RUN

■ Running from the Combine in the early hours of *Half-Life 2* is a thrilling experience thanks to masterful pacing that uses moments of quiet to enhance the impact of each action sequence.



HITTING THE ROAD

■ The introduction of vehicles in the airboat and scout car change the feel of the game, ramping up the scale as you travelled between settlements, and setting up some cool puzzles and set-pieces.



OH THE HORROR!

■ Visit Ravenholm and you suddenly find yourself in a horror game. That tonal shift is accompanied by a gameplay one as you're encouraged to use the Gravity Gun to fire sawblades.



IT'S TOO QUIET

■ Traversing this bridge to the sound of rushing wind and creaking steel steadily builds your anticipation. You know something is coming. Finally, it does, and your forced to battle a gunship.



PRISON BREAK

■ The assault on the Combine prison Nova Prospekt is one of *Half-Life 2*'s coolest moments. You bring an army of giant bugs that you control with Bugbait that you can fling at enemies.



FOLLOW FREEMAN

■ The assault on the Nexus building, followed by your battle with Striders on the street outside, is a great section with an epic feel that creates a sense that the whole city is at war.



POWERING UP

■ When the Combine try to take all your weapons towards the end of the game, they accidently power up your Gravity Gun. Cue lots of fun picking up guards and firing them into their comrades.

> **"RAVENHOLM'S HIGH CONCEPT ALWAYS INVOLVED ZOMBIES AND HEADCRABS"**
> DAVID SPEYRER

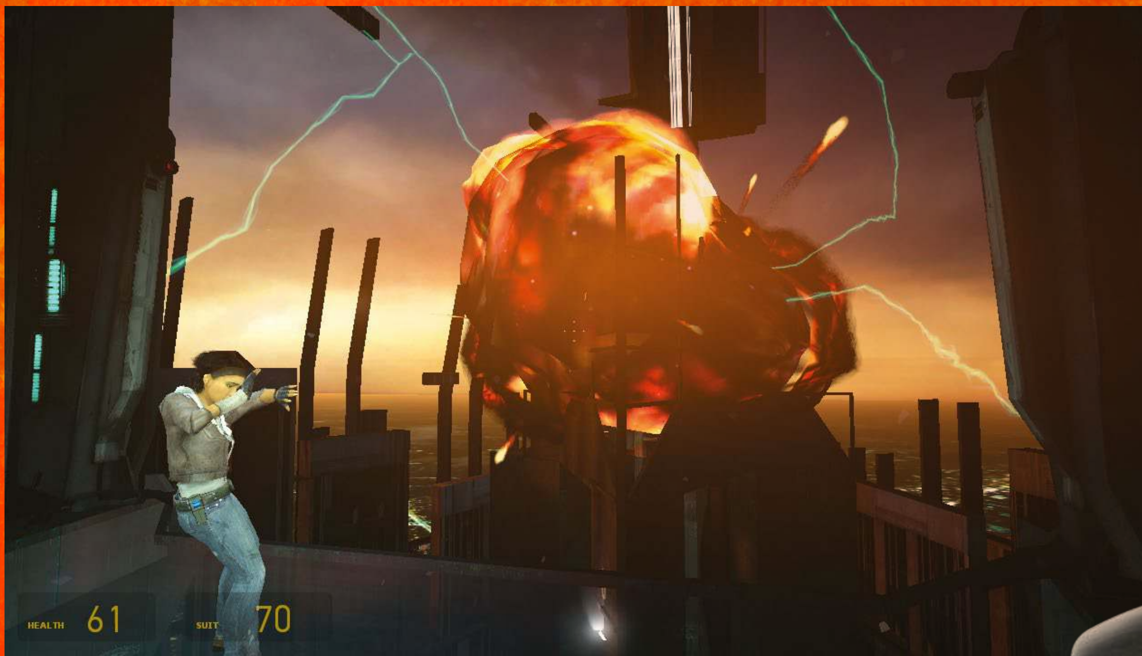
▶ "Propane cylinders could be welded to a sheet of plywood and then shot with the pistol to send the contraption flying." This was built on by a programmer called Steve Bond to create 'the Danger Ted Construction Set', which involved flinging a ragdoll of Valve artist Ted Backman across deadly ravines, "usually riding on a toilet".

The Physgun would eventually remerge as a tool in *Half-Life 2* mod *Garry's Mod*, but it wasn't right for *Half-Life 2*. "While building physics contraptions was fun, it required so much concentration that it took players out of the world," David explains. This led the team to start thinking of the Physgun as a tool for combat instead, paring its abilities down to the "two-step pick up and throw" and "one-step punt" functions. "When the gravity gun was added to Ravenholm, the object interactions, like the sawblades, were created," David continues. "Then, since everyone had expressed a desire to pick up enemies with the Gravity Gun, we let them do it at the very end of the game as a final treat."

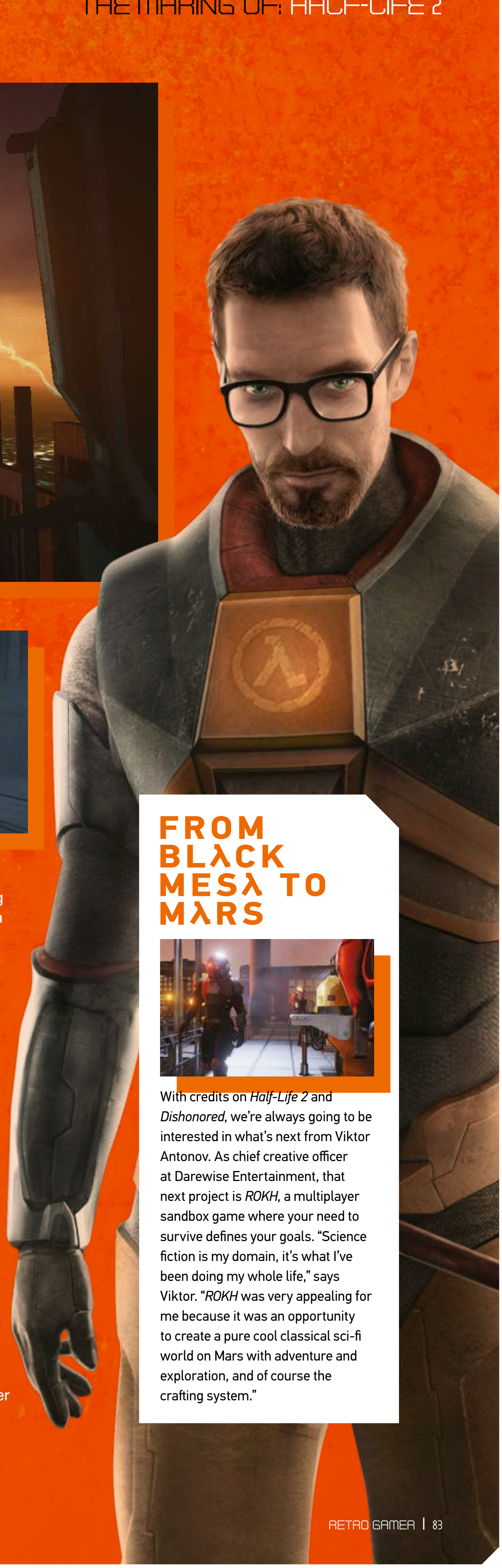
The much-loved Gravity Gun was an innovation that made *Half-Life 2* stand out, but it's just one example of the many great ideas the game is throwing at you to keep things fresh: vehicles for you to pilot, Ravenholm, where your sci-fi shooter suddenly becomes a horror game, the storming of a prison with an army of player-controlled Antlions, a squad system, and much more. Why so many different mechanics and where did they all come from? A large part of that variety can be attributed to the unique decentralised design process employed during development, in which small, mixed-disciplined, semi-autonomous 'cabals' were set up to work on particular elements or sections of the game, based on the principle of "he who designs it, builds it". The idea behind this approach is that it gives everyone a stake in development, allows space for new ideas to be developed, encourages cross-pollination of what works, and the cutting of what doesn't, all based on the vision of the group, rather than that of a single overseer who tells everyone what they can and can't do. Evidentially, it worked well for both *Half-Life* games.



» [PC] Exploring a ship called the Borealis, a location that was cut from the game, along with that ice axe Gordon Freeman is wielding.



» [PC] This doesn't look like a great situation for Alyx and Gordon to be in…



Since different cabals designed the various chapters and developed their mechanics independently, the chapters each have their own personality," David explains. "This usually resulted from a mix of top-down design and bottom-up problem solving. Originally the prison involved fighting Antlions and soldiers at the same time, but that was too chaotic for players. They'd be fighting soldiers and suddenly start taking damage from an Antlion behind them. Bugbait arose as a solution to that problem, turning the Antlions from a nuisance to an ally. Ravenholm's high concept always involved zombies and headcrabs, but the physics traps were added in a second pass and then still later the Gravity Gun gameplay was added in, after the potential of the gravity gun was realised. *Half-Life 2*'s physics system created an opportunity to make vehicles integral to the experience, so early on we started experimenting with vehicles," David continues. "The first vehicle that we tried was a tunnel digging vehicle that was used in a single level in the mines beneath Ravenholm. You used it to grind up headcrabs and a headcrab-spawning mother pod, which probably all sounds a lot cooler than it was. It didn't get beyond prototype form and we realised that if we were going to make a vehicle, players should spend a lot more time with it. That led to the dune buggy and airboat chapters, which always aimed to provide thematic variety and make the game feel more epic. The pacing of those levels are necessarily different from the on-foot levels, which emphasises the sense of variety."

Speaking of pacing, *Half-Life 2* excels in that respect; it's one of the reasons it still holds up so well if you return to it today. It knows precisely when to ramp up the action, when to provide a moment of quiet, when to introduce something you haven't seen before. "*Half-Life 2* followed a general cadence of: navigation, combat, puzzle, story, vista," David explains. "We felt that pacing contrast was super important to make the action moments feel more exciting. If players became fatigued by nonstop combat, we'd see them mentally 'check out' and lose interest. When we observed that in the same spot enough times, we generally introduced some down time in the form of a puzzle or interesting navigation without combat. Taking the player into a quiet place where they can focus on the small details calms them down so that they can respond to the next action moment."



» [PC] Valve experimented with only letting the player carry one primary and secondary weapon, but opted to let you carry an arsenal in the end.

Working with this strategy is what David describes as "an important principle of *Half-Life* pacing": letting the player have control over the pace of the game. If you want to, you can explore and find small details that add flavour to the world, or perhaps discover a small scene unfolding in an optional room. "Players can clear out an area and then spend as long as they want there," David explains. "By moving forward, the player indicates that they are ready for the next challenge."

When it comes to that next challenge, we're still waiting, but we'd rather spend our energy appreciating the *Half-Life* games we've got, rather than pining for something that doesn't exist. ✱

FROM BLACK MESA TO MARS

With credits on *Half-Life 2* and *Dishonored*, we're always going to be interested in what's next from Viktor Antonov. As chief creative officer at Darewise Entertainment, that next project is *ROKH*, a multiplayer sandbox game where your need to survive defines your goals. "Science fiction is my domain, it's what I've been doing my whole life," says Viktor. "*ROKH* was very appealing for me because it was an opportunity to create a pure cool classical sci-fi world on Mars with adventure and exploration, and of course the crafting system."



Dance Mat

» PLATFORM: PLAYSTATION **» RELEASED:** 2000
» COST: £39.99 (LAUNCH, PACKAGED WITH JUNGLE BOOK: GROOVE PARTY), £5+ (TODAY)

Konami's introduction of the *Dancing Stage* series into European arcades in the late Nineties proved to be a surprise hit, and unsurprisingly the home market was quick to respond. The kid-friendly music game *Jungle Book: Groove Party* hit shelves bundled with this officially-licensed dance mat controller in November 2000, over six months before Konami could even get a PlayStation version of *Dancing Stage Euromix* to market. While that's a late debut for an original PlayStation product, the peripheral was given decent support – releases for the PlayStation continued until 2004's *Dancing Stage Fusion*, and the dance mat controllers were also compatible with the PlayStation 2.

Unfortunately, these pads were not durable, and the third-party alternatives fared little better. You'd be quite lucky to get more than a few months of regular play out of them before they broke, particularly if they were regularly folded up for storage purposes. Still, the genre caught on thanks to its universal appeal and party-friendly nature, and the controllers sold by the bucketload. The fad died down by the mid-Noughties, but the success of dance mats proved the market for peripheral-based music games – if you need any proof, just look at your dusty old *Guitar Hero* gear! *

ESSENTIAL GAME
Dancing Stage Party Edition

Dancing Stage Euromix probably has the most nostalgic appeal, but this 2002 release has a bigger song list (a whopping 51 tracks!) and we'd argue that it's better. The game includes remixes such as *Afronova Primeval*, new Konami tracks such as *Drop Out* and *Holic*, and five licensed tracks including *Bad Touch* by The Bloodhound Gang and The Cardigans' *My Favourite Game*. Additionally, quite a few of the tracks are returning fan favourites from *Euromix*, such as *Dead End*, *Dynamite Rave* and *Paranoia*. There's also a bit more lasting appeal, thanks to the fact that you unlock songs as you play.

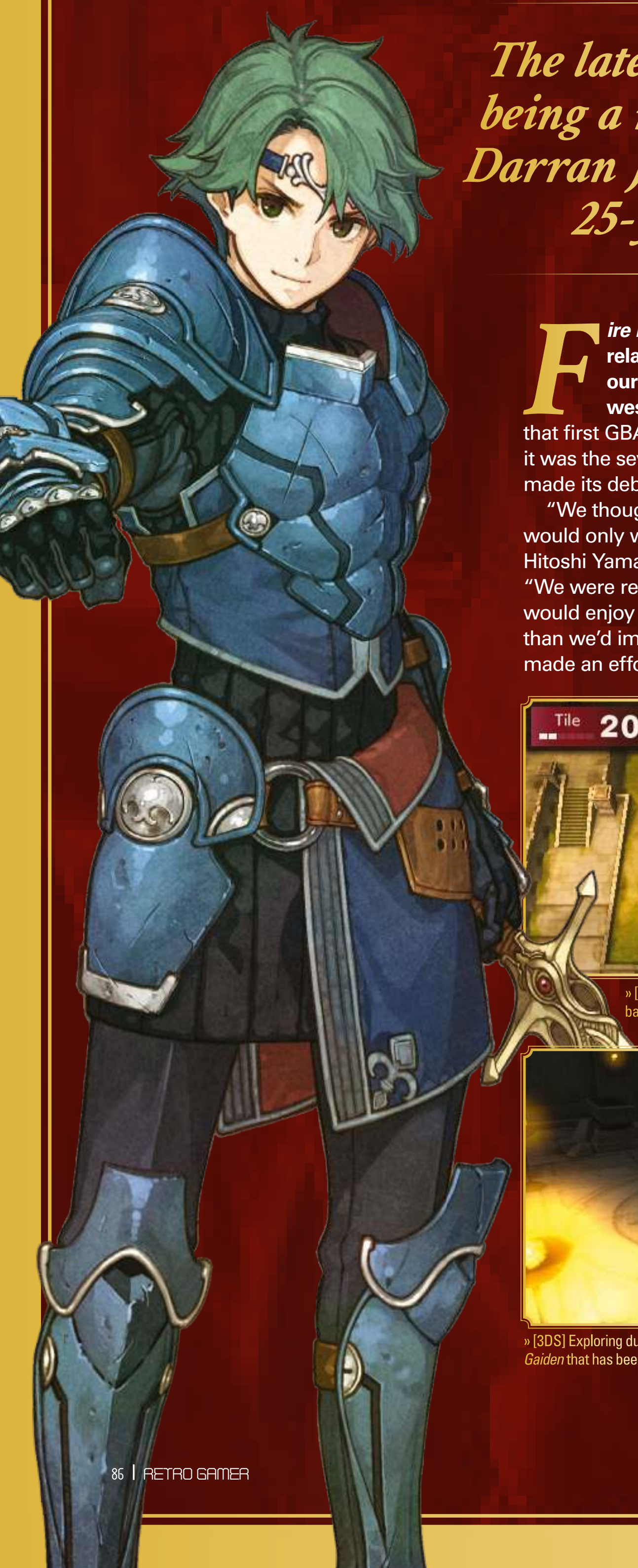




Dance Mat Fact

■ While most PlayStation dance mats offer four directional buttons for compatibility with Konami's *Dancing Stage* series, the *Dance:UK* series uses a special pad which instead has eight directional buttons.

FIRE EMBLEM™ Echoes
- Shadows of Valentia -



The latest Fire Emblem game isn't a new game at all, being a remake of the second Famicom game, Gaiden. Darran Jones asks franchise veterans about updating a 25-year-old game for a brand-new audience

***Fire Emblem* is probably considered a relatively new retro franchise to most of our readers as it made its debut in the west on the Game Boy Advance.** While that first GBA release didn't arrive here until 2003, it was the seventh game in the series, having made its debut in Japan on the Famicom in 1990.

"We thought that *Fire Emblem* was a game that would only work in Japan," explains Nintendo's Hitoshi Yamagami, a producer on the new game. "We were releasing it in the West, hoping people would enjoy it. It turned out people liked it more than we'd imagined. Once we learned this, we've made an effort to release them in the West, too."



» [3DS] Intelligent Systems has worked hard to ensure that battles are more fluid than ever.



» [3DS] Exploring dungeons is another aspect of *Gaiden* that has been overhauled for *Echoes*.

That effort also included releasing *Fire Emblem: Shadow Dragon* on DS in 2008, which was an enhanced remake of the original *Fire Emblem* game that allowed newer fans of the series to discover how the franchise first began. There was also *Fire Emblem: New Mystery Of The Emblem*, a remake of the first Super Famicom game that was a Japanese exclusive at the time. Nintendo has decided that it's time to go back for a third time, and this time it's revisiting *Fire Emblem Gaiden*, the last Famicom *Fire Emblem* game and the first to be developed solely by Intelligent Systems. The real question, however, is why now?

"After development on *Fire Emblem Fates* was finished, Intelligent Systems said that there were several things they were unable to do in that game, so they wanted to create another game on Nintendo 3DS," continues Yamagami. "However, at the time we were just starting to think about a new product for Nintendo Switch, and we wouldn't be able to give a lot of time to this Nintendo 3DS game. So the beginning was this decision to create one more game, even as a remake, before the Nintendo Switch release."

Kenta Nakanishi, a director at Nintendo, has his own reasons for wanting to revisit *Gaiden* and one of them is extremely personal. "It hadn't been released overseas, and it was very compatible with various ideas we were unable to do in *Fire Emblem Fates*," he begins. "On a more personal note, I lost my father at an early age and had played the *Fire Emblem Gaiden* software that was among his belongings over and over while thinking of him. So I had very strong feelings about *Fire Emblem Gaiden*, and boldly thought I wanted to do a remake and have many people play it. This time, partially due to the aforementioned background, it was decided we could create a remake of *Fire Emblem Gaiden* and I'm very deeply moved by it."

Yamagami actually has additional ties to *Echoes*, as he was involved with the original game as a



» [3DS] New cutscenes will give greater insight into the story that *Echoes* is based on.



» [3DS] *Fire Emblem Echoes* retains the overworld map that first featured in *Gaiden*.

debugger. "I had done debugging for the first game, *Shadow Dragon* and *Blade Of Light*, so I took charge of it for *Fire Emblem Gaiden* after that, but the rules are completely different from the first game and it was difficult," he recalls. "I remember I had a very hard time. Even now, I'm reminded of being beaten again and again by the Mogalls who appear towards the end of the game. A Casual Mode has been added to this game making it more accessible. I'm very interested in what customers today feel about the *Fire Emblem Gaiden* game I originally debugged."

Fortunately, numerous patches exist which enable gamers to experience *Fire Emblem Gaiden* in English. It's certainly worth investigating, as it's a very different beast to the original *Fire Emblem*. Unlike other games in the series it featured small dungeons and an overworld map that could be navigated by the player, as well as new mechanics like branching promotion trees for villagers, default weapons that would never break, towns that could be freely explored, support for certain characters and much more. Many felt at the time of release that the changes diluted the strategy found in the earlier game and it's telling that Intelligent Systems would drop many of these mechanics in later games.

Now, those mechanics are being embraced in the remake and it's a way of freshening up the series for a hungry audience who might not realise that the new game mechanics they are experiencing were first introduced 25 years previously. With *Fire Emblem Gaiden* currently available on the Virtual Console in Japan it's been relatively easy for Intelligent Systems to rediscover the strengths and weaknesses of its old game. Toshiyuki Kusakihara, one of Intelligent Systems' directors was only too happy to explain ▶

THE DNA OF FIRE EMBLEM ECHOES: SHADOWS OF VALENTIA

It may be familiar, but Intelligent Systems has made some tweaks





GRID-BASED MOVEMENT

■ The old-school movement of *Gaiden* remains so you'll be moving that cursor around quite a lot during the course of your campaign.

TINY HEROES

■ The overview screens of *Echoes* retain the distinctive style of the original Famicom sprites, albeit with added detail.

A TOUGH CHALLENGE

■ Although Mila's Turnwheel does make the remake a lot easier, there's still the option to not using it, emulating the toughness of the original game, *Gaiden*.

STAT CITY

■ Early *Fire Emblem* games always had an insane amount of stat-based skills to juggle and *Echoes* is no exception.



▶ how important that Virtual Console release of *Gaiden* became to the new team charged with remaking it. "Half of the staff played on their own Nintendo 3DS and each did research independently," he tells us. "That game was from 25 years ago, so we were struggling from the stage of accurately understanding the original game's specifications. One cause of that was that there aren't many of the original staff left. For example, the source code for *Gaiden* was noted in the Famicom programming language (assembler), but it's a language that is not used much anymore, so there were few programmers on the team who could handle that, and it took a fair amount of effort to do the analysis. For the AI, too, we had to decode the assembler language from the Famicom version and create custom AI from *Fates*, so that enemies would behave like in the original."

Team sizes have also changed since *Gaiden* was released something, which has also impacted on *Echoes*, as Masahiro Higuchi, a producer at Intelligent Systems explains. "There were about ten main staff members at Intelligent Systems which produced the original *Fire Emblem Gaiden*," he begins. "That's the same number of people doing sound on this game. The total number of people involved in the project has increased considerably compared to the original *Fire Emblem Gaiden*, and I think it's probably more than 20 times as many. This is because the number of things we must create has increased together with the evolution of hardware and the increase in available data capacity."

Although the team is far larger than before, Kusakihara still wanted the strengths of *Gaiden* to shine through in the new update and while he

MEET THE CAST

The key characters of Fire Emblem Echoes: Shadows Of Valentia

GRAY
■ Gray is one of Alm's oldest friends and joins him on his new adventure. He's an easygoing member of the group but lacks self-awareness and can often end up getting in trouble.

CLIVE
■ Clive is the founder of the Deliverance, a group of fighters that Alm comes into contact with. He's a member of the upper aristocracy and started off as a knight before founding his new company.

MAE
■ Although she's Celica's servant, she's also a close friend of the priestess and a skilled mage in her own right. She has a rivalry with Boey (pictured above right), who has sworn to protect Celica at all costs.

VALBAR
■ This heavily-armoured fighter lives life to the fullest and will happily help anyone in need, regardless of the possible consequences. While he was performing his knightly duties pirates killed his family.



ALM
■ This feisty 17-year-old is one of *Echoes*' primary protagonists. He heavily values justice and is often considered reckless by those that know him. He's the friend of Celica and can be extremely stubborn.

CELICA
■ Celica is Alm's childhood friend who was separated from him when they were still young. She can come across as cold and standoffish, but it's because she carries a lot of responsibility on her young shoulders.



» [3DS] It wouldn't be a *Fire Emblem* game without an insane amount of characters to level up. You're going to need every available experience point.

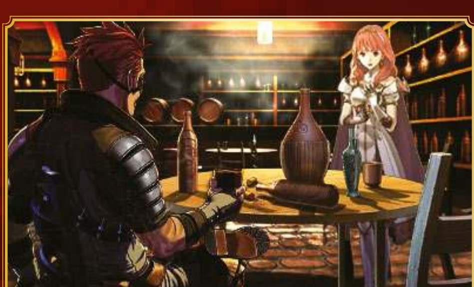


» [3DS] The battles of *Echoes* take place over a variety of different locations, including boats.

> *"We had to decode the assembler language from the Famicom version and create custom AI from Fates, so that enemies would behave like in the original"*
>
> Toshiyuki Kusakirara

stressed to us that he wanted the RPG elements of the original to feature, he also knew the gameplay had to be updated for a new gamer generation. "From the very beginning I definitely wanted to make it possible for the player to actually walk around on the continent of Valentia, such as in dungeons, and be able to feel a sense of oneness with the main character," he explains. "In the previous game, *Fire Emblem Fates*, there is a 'My Castle' feature where you have a base you can edit. Initially the plan was to make it possible to walk around this base, but we weren't able to polish this to a level that would satisfy as a commercial product, so by necessity we had to keep it to looking at surroundings while watching over the main character's shoulder. This time I think we were able to properly tie up loose ends there. We are [also] implementing elements that were in the original but not displayed on screen, so most players probably hadn't noticed, such as things like experience from taking part in a battle or support-related things, and [we have] made them easier to notice."

While everyone on the team wanted to modernise *Gaiden* for a new audience, it has still been an concerted effort to ensure that *Echoes* stays true to its source material, which has created numerous technical issues for Kusakirara and his team to solve. "This time, there are lots of creative things included in things like animation during battle, and it has been kicked up a notch in accordance with three themes: faster pacing, better visuals, and including an homage to the original game," he continues. "Particularly in terms of pacing, we're doing things like having characters pull out their sword as they run onto screen at start of battle or combining the evasion and the counterattack together. So each and every action feels more naturally connected." Pacing was also paramount to Higuchi, as well as solving the issue of the 'weapon triangle', which has always been a key mechanic of the series. "For game quality, we're adjusting some parameters to place emphasis on a faster sense of pacing while following the original game as much as possible," he explains. "Although the current *Fire Emblem* games have the 'weapon triangle', this wasn't in the original, and instead of using this, players had to use the terrain to their advantage. This style of battle may feel new to users familiar with the weapon triangle system."



» [3DS] *Fire Emblem Echoes* will be the first main game in the series to feature full voice acting for in-game dialogue.

A brand-new ability that may upset hardcore fans of the series is 'Mila's Turnwheel', which allows gamers to rewind previous moves that may have led to a character's demise. It seems out of character for a series that once embraced permadeath gameplay (when a character dies, they're dead for good) but Kusakirara has a good reason for its inclusion. "It may seem surprising, but the reason we introduced this system was that we wanted users to enjoy it more as a strategy game," he tells us. "*Fire Emblem* is a game where the fun is in the high difficulty. However we thought that at the same time it was important to lower the barriers for new players so they could become interested in it too. The main goal with Mila's Turnwheel was to make users actually think about what other ways there could be to beat the situation by rewinding time when they lose, and so have them experiment and try new things."

It might not be as well known as some of its bigger franchises, but it's clear that both Nintendo and Intelligent designs have a lot of love for *Fire Emblem* and want to share that love with fans. "One of the themes we had in development was wanting customers that only knew *Fire Emblem* after *Fire Emblem Awakening* was released to enjoy the older games in the series too," concludes Nakanishi." Yamagami is also proud of the game, but feels there are plenty of new elements that substantially build on the 25-year-old original. "I'd just like to say that although *Echoes* is technically a remake, I'd like people to play it without thinking of it as such. The original title was never released in Europe and it's been remade so thoroughly that the staff from the original game were so surprised [they] could barely recognise it. Also the game system and visuals are very much on par with a completely new game, so I hope you can enjoy it as our ultimate work on Nintendo 3DS."

It's unclear whether any more *Fire Emblem* games will be remade at this moment in time, but with two further games on the horizon what is clear is that Nintendo has plenty of faith in its long-running franchise. ★



» [3DS] Archers are going to be a lot deadlier in *Echoes*, so plan your approach accordingly.

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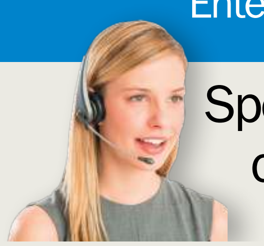
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> Making videogames seemed a lot more interesting than getting a degree of some kind in physics or mathematics
>
> Mark Cerny

In the chair with...

MARK CERNY

From making games for Atari to working with Sega, 3DO and Sony, Mark Cerny may only be 52 years old but he sure has seen it all. He talks to David Crookes about his success

American games developer Mark Cerny left university in California at the age of 17 to join Atari where he designed and coprogrammed *Marble Madness*. He eventually left to work with Sega in Japan and later found himself at the helm of Universal Interactive Studios before forging an amazing career in partnership with Sony. But for those who know him, his success will have come as no surprise. Mark was, after all, coding a mainframe computer aged five, getting admiring glances as one of the best US gamers in his teens and constantly looking to push the boundaries of technology. No wonder he became the lead architect of the PlayStation 4. It's time, then, to look back at this 52-year-old's remarkable 35-year career.

What are your earliest memories of videogames and what was it that attracted you to them?
My very earliest memories are of playing games at the local science museum. They had a PDP minicomputer and a number of terminals which basically looked like electric typewriters. You'd type in your move – maybe specifying how to rotate and thrust your spaceship in a *Star-Trek*-themed game – your keystrokes would then get sent to the shared minicomputer and you'd watch as the computer printed out an updated diagram of the ongoing battle, using asterisks for the stars and letters for spaceships. The games were written in BASIC, and if you got bored with the ones they supplied you could try to write your own. That's actually how I learned the rudiments of programming!

It's been said that you were a big fan of paper RPGs as a child and that, in 1977, you looked to translate the principles of them into a computer version. How tricky was it and far did you get?
It was more ambition than common sense! The target was high and the technology was very primitive – my brother and I were using punched cards for our programs, and scopes for our displays, and at the same time the creative target was of the level of *Final Fantasy VII*. In terms of gameplay, the game never did get very far but it was a great way to learn Fortran and computer graphics programming. In fact, if you're looking for trivia, I worked for over a dozen years as a programmer, but I've never taken a programming class. I wonder how different my life would've been if I had.

You left education at 17. What was it about Atari that was so alluring?
I'd been spending most of my free time either playing games at the local arcades or programming; making videogames seemed a lot more interesting than getting a degree of some kind in physics or mathematics. I targeted Atari's coin-op division because they'd created so many incredible games, including *Asteroids*, *Missile Command*, *Battlezone*, *Centipede* and *Tempest*. And they were local.



» [Arcade] Mark worked with Owen Rubin on designing the Atari vector arcade game *Major Havoc*.

My parents were not keen on the idea, to say the least. The pitch was I'd take a year off studies and see how it turned out – certainly I could have done that and still graduated ahead of time! But the work was interesting enough that I never did go back and finish my degree.

What was the interview like with Atari's head of product development?
It was a fairly terrifying day. One of the senior engineers tested my programming skills and deemed them sufficient for an entry level job as a programmer-designer-artist. That lead to a three-way conversation between myself, the engineer who'd interviewed me, and the head of product development – the topic being, what to do with this clever, awkward kid?



SELECTED TIMELINE

GAMES

- **MAJOR HAVOC** [ARCADE] 1983
- **MARBLE MADNESS** [ARCADE] 1984
- **SHOOTING GALLERY** [MASTER SYSTEM] 1987
- **MISSILE DEFENSE 3-D** [MASTER SYSTEM] 1987
- **SHANGHAI** [MASTER SYSTEM] 1988
- **CALIFORNIA GAMES** [MASTER SYSTEM] 1989
- **DICK TRACY** [MEGA DRIVE] 1991
- **KID CHAMELEON** [MEGA DRIVE] 1992
- **SONIC THE HEDGEHOG 2** [MEGA DRIVE] 1992
- **CRASH 'N BURN** [3DO] 1993
- **TOTAL ECLIPSE** [3DO] 1994
- **THE OOZE** [MEGA DRIVE] 1995
- **DISRUPTOR** [PLAYSTATION] 1996
- **CRASH BANDICOOT** [PLAYSTATION] 1996
- **CRASH BANDICOOT 2: CORTEX STRIKES BACK** [PLAYSTATION] 1997
- **SPYRO THE DRAGON** [PLAYSTATION] 1998
- **CRASH BANDICOOT: WARPED** [PLAYSTATION] 1998
- **SPYRO THE DRAGON 2: RIPTO'S RAGE!** [PLAYSTATION] 1999
- **CRASH BASH** [PLAYSTATION] 2000
- **SPYRO: YEAR OF THE DRAGON** [PLAYSTATION] 2000
- **JAK AND DAXTER: THE PRECURSOR LEGACY** [PS2] 2001
- **RATCHET & CLANK** [PS2] 2002
- **JAK II** [PS2] 2003
- **RATCHET & CLANK: GOING COMMANDO** [PS2] 2003
- **RATCHET & CLANK: UP YOUR ARSENAL** [PS2] 2004
- **RESISTANCE: FALL OF MAN** [PS3] 2006
- **UNCHARTED: DRAKE'S FORTUNE [PS3]** 2007
- **RATCHET & CLANK FUTURE: TOOLS OF DESTRUCTION** [PS3] 2007
- **PAIN** [PS3] 2007
- **RESISTANCE 2** [PS3] 2008
- **GOD OF WAR III** [PS3] 2010
- **KILLZONE 3** [PS3] 2011
- **KNACK** [PS4] 2013
- **THE LAST GUARDIAN** [PS4] 2016
- **KNACK 2** [PS4] 2017



> "Atari was a beautiful place. Atari was also a terrifying place"
> Mark Cerny

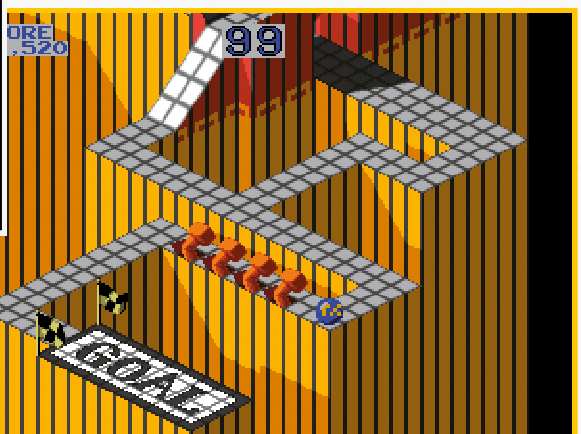
And would it even make sense to have a 17-year-old teenager in the company?

The final question was, 'Why do you want to spend the best years of your life, before you burn out, making videogames?' Their feeling being that making videogames was something that young people did, though not usually 17-year-olds. They felt development was intense and difficult and that the work was unsustainable. In other words, their feeling was that I'd most likely be chewed up and spit out by the industry, and that I'd have a difficult time at perhaps the ripe old age of 30 of making a fresh start.

My response was, 'I don't think I'm going to burn out,' and I'm not sure if that was boldness or desperation. But it got me the job, and it turns out in retrospect to have been true.

Did you have a feeling that videogames could provide a career for you at that stage, though?

Much of why I left the university was that the expectation was that I'd get a PhD in something like physics, and the sheer time to get that degree was weighing on me. Even on an accelerated schedule it would take something like five years. So part of the fun of joining a games company was speed. Not only would I have an income and independence at 17 but also a year would be more than enough time to get a game done. I think the last thing I was thinking of was what my life would be like 20 or 30 years later.



» [Arcade] *Marble Madness* is as much a classic today as it was on its original release.

What was it like at Atari at that time: how much freedom did the company give you and what kind of creative environment was it?

Atari was a beautiful place. Atari was also a terrifying place. The reason was the same – as a programmer-designer-artist I, like everyone else, was tasked with dreaming up an original idea, pitching it, and executing it. And nothing but the best would do. So a lot of freedom, and a lot of pressure as well. It was an extraordinary place, and I'm blessed to have been able to begin my career there.

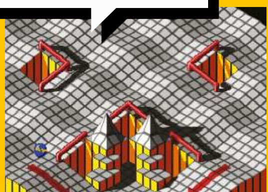
Which games did you get to work on at first and was it a good learning experience?

One of the execs had seen a sliding tile puzzle game at a Japanese trade show, it was a fairly obscure Konami arcade title called *Guttang Gottong* (I think it was called *Loco-Motion* here). I was assigned to do something in the genre as a training exercise – the result was a game called *Qwak*. I did finish the title and you can see it on MAME, but it didn't earn enough quarters to be manufactured.

***Marble Madness* was your successful, debut game – and what a debut it was. You are credited as the designer and graphics programmer of the game: what was the pitching process like and how much time did you get given to create it?**

I had a few months to work on the design, and it was approved pretty readily. At Atari in those days,

FIVE TO PLAY Magic from Mark



MARBLE MADNESS 1984

■ Mark designed this hugely popular isometric marble-rolling arcade puzzler for Atari, inspired by the artwork of MC Escher. It was developed over the course of ten months and it tasked players to use a trackball to guide a marble around six courses while avoiding obstacles and watching the clock.



MISSILE DEFENSE 3-D 1987

■ Not only did Mark design and program this anti-nuclear war shooter for the Master System at the height of the Cold War, he also invented a pair of liquid crystal shutter 3D glasses which could be used to play it. Five other games made use of the unique SegaScope 3-D peripheral.



SONIC THE HEDGEHOG 2 1992

■ Having founded the gaming studio Sega Technical Institute in the US, Mark persuaded the lead programmer of *Sonic The Hedgehog*, Yuji Naka, to join his team with the promise of more cash and freedom. It secured Mark the *Sonic* sequel and handed him a key role in its direction.



CRASH BASH 2000

■ At one point in his career, Mark formed his own games company (called Cerny Games) in 1996 and, given that he'd had a big hand in developing the *Crash Bandicoot* series with Naughty Dog, he was keen to keep the franchise going. He designed the 28 levels of the party game *Crash Bash* in conjunction with Eurocom.



UNCHARTED: DRAKE'S FORTUNE 2007

■ As if Sonic and Crash were not big enough gaming icons to be associated with, Mark helped design *Uncharted*. This PlayStation exclusive also enabled Mark to continue his close relationship with Sony, which even saw him design the PlayStation 4.

each arcade game ran on unique hardware so part of the design process was to work with the hardware team on the required specifications. The actual game development work couldn't start for real until a hardware prototype was complete which could take six months or even longer!

During that wait time, I was able to work with Owen Rubin on *Major Havoc*. He very kindly made room on the project as a full partner even though he was something like two years into development of the game. The result was that I contributed to what I believe is the only vector arcade platformer ever created. Pretty cool!

What sort of technology did you consider for *Marble Madness* – we've seen mention of touchscreens and motorised trackball controls? Did Atari put great emphasis on pushing the boundaries in such a way?
Each game needed to be unique and it was a pretty radical philosophy. For example, if there had ever been a head-on-head 2D fighting game (think *Street Fighter*) then you wouldn't be allowed to make one as that would be insufficiently creative. And that philosophy extended to the controls: each game was expected to have its own unique approach. That lead to a lot of things: lots of buttons for asteroids, the trackball for *Missile Command*, the spinner for *Tempest*, the 1-D trackball for *Major Havoc*, the flight controls for *Star Wars*, and so on. With *Marble Madness*, we gave it a good try with the motorised trackball controller but ultimately we had to compromise and ship with two conventional trackballs.

Why did you opt for 3D?
Gameplay is of course important, but as a player I'm really attracted to graphics. I'd chosen to approach Atari rather than Activision in 1981 because more could be done graphically with arcade games than for those on the Atari 2600, which was the hardware Activision was focusing on in those days. But also 3D offers something beyond just being 'pretty' – there's a freedom of exploration in a 3D world that just doesn't exist in a 2D setting. As an arcade game player, I liked the tank combat in *Battlezone*, but what I really wanted to do was drive into the distance until I reached that volcano. Sadly, I had to wait for about 15 years and the development of *Spyro The Dragon* before I could make a game with that degree of freedom.



» [Master System] In his early days at Sega, Mark was asked to program ports such as this one of *California Games*.

With the game doing so well, did Atari do all it could to keep you and get you to come up with lots of ideas for new games?
The arcade business hit hard times starting in the summer of 1982, just six months after I joined Atari. The reason was simple: there were something like 1.5 million arcade games in the US at that time, in arcades and convenience stores and the like, so it was getting really hard to find a buyer for new games – they'd just cannibalise the income of the existing ones. As a result, on a corporate level, Atari was very chaotic. I think there were five rounds of layoffs in the three-and-a-half years I was there.

Also, Atari had very thick management, even though there were only 15 or so programmer-designer-artists there were three layers of management between me and the vice president of product development. All of whom were very well-meaning people, but it did sour the experience to some degree. So I decided to leave Atari behind and become an independent arcade game creator.

Why did you decide to not only leave Atari but also the US and take a job with Sega?
The order was actually a little different from that. After I set up shop as an independent, I signed a contract

CRASHING & BURNING

The developer sheds some light on crunch time

Mark Cerny has been no stranger to hard work and he had thrown himself into crunch periods in the same manner as many developers over the years. Of all of the games he has created, however, one stands out as having had the toughest of deadlines. That game was Crystal Dynamics' futuristic racing/shooter *Crash 'N Burn* which was released in 1993 as an exclusive for the 3DO console.

"Our mission was to have it ready in time for the launch of the 3DO and I believe we were only one of two titles that shipped on the same day as the hardware," reveals Mark. "But it was a brutal schedule and we had to finalise our game before the operating system for the console was even complete.

"Even doing double all-nighters, though, I wasn't the one working the hardest. That honour would go to the folk processing the videos that were in the game. The tools were primitive and required constant supervision, if memory serves they ended up working 142 hours one week to make one of our deadlines. Since a week only has 168 hours in it, that left just 26 hours for sleeping and breaks." A planned PlayStation release in 1995 was cancelled.



» [3DO] Mark and the rest of the Crystal Dynamics team worked tremendously hard on *Crash 'N Burn*.

with Sega to create both hardware and software for an arcade game. I had a partner of sorts, and the idea was that he would do the hardware and I'd do the software.

Shortly after getting started, though, my partner got distracted by other opportunities, and rather than finding someone else to do the hardware I leapt at the chance to do it myself. I'd always been fascinated by that side of the business and I ended up spending the next nine months designing and building a prototype of an arcade hardware.

Unfortunately, all that meant that a lot of time was passing. Sega was running out of patience with my arcade game, but also they were planning their entry into the US market with a new console. The upshot was that we decided I would move to Tokyo for a while, leave hardware to others, and create a game or two for the Mark III (aka the Master System in the US and Europe).

> "Sega felt that the path to success was developing titles like mad"
> Mark Cerny

How different was Sega and could you sense, after the videogame crash, that gaming was back on the rise?

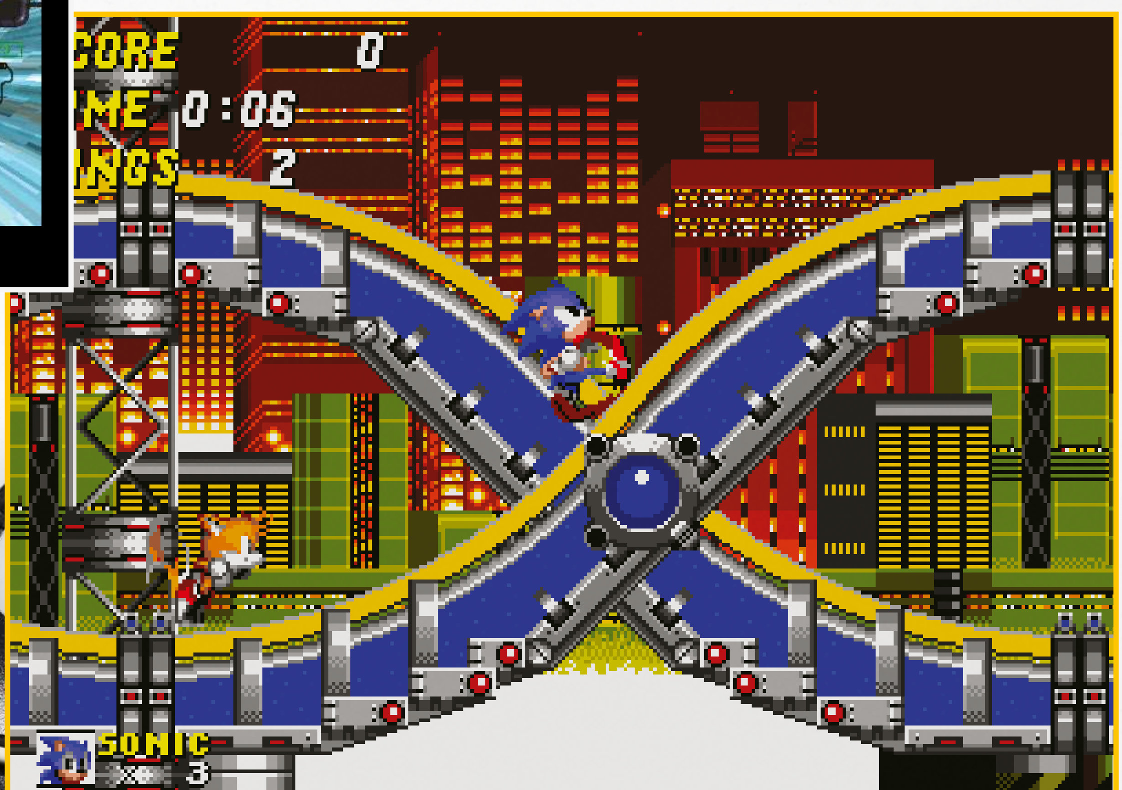
Sega had a breakout hit with *Hang On*, and was in the process of creating follow-ups like *OutRun*, so definitely they were experiencing a level of success in the arcade business well beyond what Atari could achieve. And they were funnelling their profits into the console side of the gaming – it was clear from Nintendo's successes in the US in 1984 and 1985 that if the game quality was there, a console and its games could sell.

Was there any frustration that the Master System was not doing as well as Sega may had hoped and that Nintendo was beating it with its NES?

Sega's hardware was just as good as Nintendo's, if not better, but they just didn't understand that what was making Nintendo sell was the quality of the games. At CES in the summer of 1986, we proudly showed off a few dozen titles at our booth, but only two had strong gameplay and none of them were of the quality of *Super Mario Bros.*.

Very bizarrely, Sega's management felt that the path to success was developing titles like mad, the goal to be able to say that, 'The Master System has 80 games and the NES has only 40.' Since the games needed to be created internally – we had only one third-party making games – that meant that the work environment in Tokyo in 1986 and 1987 was a bit of a sweatshop, and most of the titles were shovelware.

I will say that later on Sega as a company became much more enlightened about game creation as a whole, it was just those Master System days where the number of titles shipped was more important than their quality.



» [Mega Drive] *Sonic The Hedgehog 2* was the first in the series to introduce the two-tailed fox Miles 'Tails' Prower.





YOU ASK THE QUESTIONS

We threw Mark your messages in a bottle, and he answered

NORTHWAY: Was *Marble Madness* deliberately designed to be a bit offbeat?

There was an unwritten rule that whatever went in – whether it was a creature that threatened you or an obstacle that you had to navigate – would be a bit on the quirky side. Without that, the grid-based playfield might have come off as a bit plain.

MERMAN: Have you ever abandoned a game design because the hardware could not handle it?

I've never abandoned a game, but very frequently when making games we need to abandon an approach and find another because the hardware can't handle it. That was true 20 years ago, it's true today, and I'm sure it will be true 20 years from now!

MERMAN: What was your favourite hardware to develop on?

Putting aside the various PlayStation consoles (as I'm a little too close to comment) I've got a soft spot in my heart for the Master System, especially the Z80 CPU. The hardware was simple but very capable.

DRS: What did you think of the very odd 'track barrel' controller on the cab?

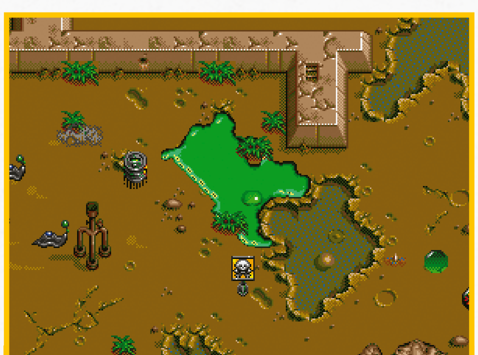
It served its purpose. The goal with the 'track barrel' was allowing lateral control of player speed, larger or smaller, to the left and right. An analogue joystick might have allowed for the same, but the ones in existence at the time were very finicky and prone to break.

Were you impressed by the hardware powering the Mega Drive?
Well, as with any hardware, at first it feels luxurious, and then within a few months you're back to feeling that the hardware you're working on is underpowered. But certainly the CPU was nice and familiar, it was the same 68000 family that I'd used on *Marble Madness*.

Did you have to approach games on consoles differently to those that were released in arcades and, after being such an ardent arcade player, were you beginning to prefer console gaming?
I definitely did approach console game design just as if they were arcade games on cheaper hardware. I didn't fully get out of that mode until *Crash Bandicoot 2* in 1997, a full decade later!

Arcade games had to either kill the player immediately or find another way to get the player to insert another quarter or token into the machine. It was just economics – if average play time exceeded four or five minutes, it became really difficult for the game to earn enough money for the operator to justify them purchasing it. So as arcade players, we got very used to facing what appeared to be impossible odds – conversely, a game that didn't immediately try to kill us felt very odd indeed.

Definitely the current boom in 'masocore' games ('masochistic' plus 'hardcore' equates to 'masocore', obviously) ties into the same spirit. When the game is fighting you every step of the way, you can definitely feel proud of whatever progress you make.



» [Mega Drive] Sega Technical Institute released oddities like *The Ooze*.



» [Mega Drive] *Kid Chameleon* was the second game produced by the US-based Sega Technical Institute, after the release of *Dick Tracy*.

Which of your Sega games did you enjoy programming the most and why?
I think for pure enjoyment it was my Master System port of *Shanghai*. I used a lot of tricks in that program – for example, the system didn't have enough graphics memory to display a large bitmap, so I would track where the beam was on the TV and do just-in-time copies from system memory to the graphics memory. I used ray casting to generate the shadows of the tiles. There's a dragon that appears and then fades away – if you beat the game, I found a nice way to use dithering to make it disappear.

What really made it nice is that it was just a three-month project, start to finish. Not the six weeks I'd been hoping for, but still pretty good.

Sega presented you with the opportunity to work on console design. Are you able to tell us more about your role and what you were asked to get involved with?
I wasn't particularly involved at Sega, it's just that the hardware team did reach out to the internal developers and ask our thoughts on feature set. But when I said something like, 'We could really use 8-bit colour' (meaning eight bits each for red, green and blue, so choosing from a palette of 16 million colours like we do today) they'd just laugh.

Why did you go to work for Crystal Dynamics?
Sonic the Hedgehog 2 was a great project to work on, but it was also frustrating in many ways. As it was getting ready to ship, Madeleine Canepa, the marketing lead on *Sonic The Hedgehog* at Sega, let me know privately that she was leaving and starting up a new company with some friends. It was actually a pretty

easy decision to join her. I became the first member of product development.

What was it like developing for the 3DO and using CD-ROMS? What did your role of chief technologist entail? And why did you leave?
Chief technologist just meant I was in a CTO-like leadership role: that is, tasked with making sure the teams were using best practices and tools. I was not on the board of directors so it was 'CTO-like' rather than a true CTO position.

I've never worked as hard in my life as I did at Crystal Dynamics. We all worked hard. All-nighters? Sure. double all-nighters? Yes, some of those too, by which I mean coming to work on a Tuesday and going home on a Thursday! But we didn't work that hard because we were being ordered to, we did it because it was fun and we had a large stake in the success of the company. Madeleine made sure of that.

As for using CD-ROMs, they felt essentially infinite in size. With the kind of action games we were doing in 1992, we weren't going to fill one of them!





» [PlayStation] *Crash Bandicoot* went down a storm on the PlayStation, becoming a top-selling game and spawning many sequels.

I left because I was offered a dream job at Universal Studios – a friend of mine was one of the core executive team, and he was trying to bring Universal Studios into the exciting new world of 'multimedia'. His pitch was a fantastic salary for me, a big bag of money to spend on creating the titles, and pretty much complete creative freedom to set the direction of the company in multimedia. After I'd worked out that 'multimedia' meant "videogames with great production values," it was a really easy decision to make.

Can you put a finger on why the 3DO failed to take off?
The hardware was weak, even though it was being billed as capable of supporting 3D games, in reality it wasn't powerful enough. Even the rudimentary graphics of *Crash 'N Burn* and *Total Eclipse* would only run at something like 20Hz and 15Hz respectively. The hardware was also quite expensive, and that was only made worse by the business model. Unlike Sega, 3DO did not manufacture and sell the hardware, they had an agreement that Panasonic would do so and Panasonic didn't make money off of the games, they had to make money by selling the hardware at a profit. As a result, the retail price of the console ballooned to $700.

3DO didn't supply a set of tools for making games either, which made creating them even trickier – each developer had to make their own toolkit from the ground up. As a result, there just wasn't much worth playing on the console. So between the low performance, high price, and lack of games… well, I think you know how that story ended.

How much of a grounding did the 3DO give you for your eventual work – as one of the first non-Japanese developers – on the PlayStation?
Struggling to create 3D games (and to use CDs) was definitely good practice for the PlayStation, which was a hardware capable of supporting 3D games. Though, to



» [PlayStation] *Crash Bash* sold 1.9 million copies when it was released in 2000 and it was the first *Crash* title not to be made by Naughty Dog.

be honest, you had to be really clever in your approach, creating something like *Crash Bandicoot* was not trivial.

Your games were selling in their millions – was this the watershed moment: the era when gaming was becoming mass-market and when you could produce the games that you always wanted to produce free of many technological restrictions?
Actually, the technological restrictions were still a major consideration when creating games. To give one example: the original PlayStation didn't have quite everything needed for 3D, in that when rendering textured objects there was no perspective applied to the textures. So even displaying flat ground needed a talented programmer and some clever algorithms.

Why did you set up your own consultancy and what changes have been important since 1998?
The Universal success with *Crash* and *Spyro* was a combination of the Universal seed money, the developer talent, and Sony marketing power. That seed money was great for Naughty Dog and Insomniac in 1994 or 1995, when they weren't yet recognised as world-class teams. But as soon as they had name recognition, Universal's role disappeared.

As a consequence, Naughty Dog and Insomniac chose to work directly with Sony on their next projects; by removing Universal, that reduced the profit split from three-way to two-way. That also meant I had a big decision to make. As president of Universal Interactive Studios, would I search for up-and-coming teams to replace Naughty Dog and Insomniac? Or would I leave Universal and continue to work with my friends somehow? I chose the latter, and spent the next few years doing the same mix of programming,



» [PlayStation] Fans of *Crash Bandicoot* will be pleased to hear that the original three games are currently being remastered by Activision.





> There are no 'unimportant' jobs, everyone is aware of how critical their hard work is
> Mark Cerny

design and production work on the games that I'd been doing as an executive at Universal. All that really changed was my business cards.

As for how my consultancy's work has changed since 1998, mostly it's my involvement with hardware. In the Nineties, hardware was developed pretty much in isolation: that is, minimal input from developers. But of course these days, game creators are deeply involved in the design of console hardware.

You've become very linked with Sony – how would you compare its approach to gaming to the other console companies you've worked for?
On a personal level it has been delightful to work with Sony, first as an outsider at Universal and then from a much closer position. There's such a respect for gaming in the Sony organisation. And there's a lot of heart in all of the products, whether they be games, or hardware, or something else.

Why do you think Naughty Dog has become such an important, talented studio?
It's even more surprising when you realise that Naughty Dog has been lead by two different pairs of people, each with their own vision for the company and what sorts of games it should make. In the early PlayStation days, Jason Rubin and Andy Gavin were the driving force behind the company, and the focus was on action platform games. In 2004, after the founders moved on, Evan Wells and Christophe Balestra took over the leadership role, and decided to focus on more mature story-driven titles: *Uncharted* and *The Last Of Us*.

I think the company culture has a lot of traits in common between the two eras. The structure is quite flat – there is essentially no traditional management, with not even a producer role within the organisation! And there are no 'unimportant' jobs, everyone is aware of how critical their hard work is to the quality and success of the games.

There's also long tradition of excellence in craftsmanship. You can see that in anything from the lush environments of *Crash Bandicoot* to the animation of *Uncharted* – the technological foundation that the programming staff creates provides the foundation for the artists and animators to show their talents. Of course, in the last ten years or so Naughty Dog has also added world-class storytelling to its resume, beginning with Amy Hennig on *Uncharted* and continuing with Neil Druckmann (and others) today.

Of your games, which stand out the most for?
I'd have to say *Crash Bandicoot 2*, because we took a clear-eyed look at the failings of the first *Crash* game, and created a much more enjoyable experience. As a brand, *Crash* had the top sales spot on the PlayStation, and that wouldn't have been possible without us pretty much rewriting our playbook after the first game. *



» [PS4] *Knack* was a launch game for Sony's PlayStation 4 and was designed by Mark. A sequel is currently in the works.

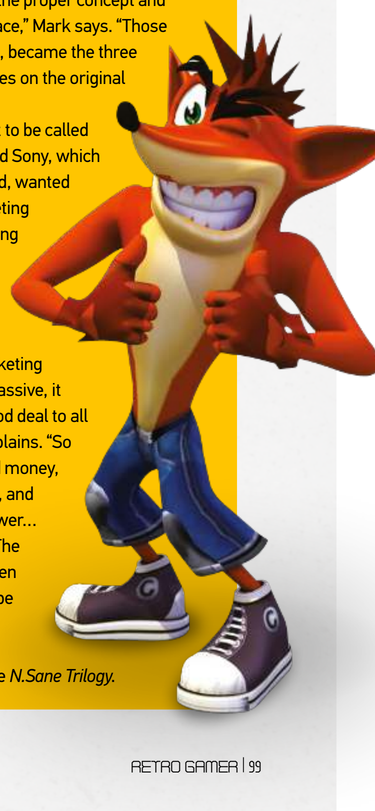
CREATING CRASH

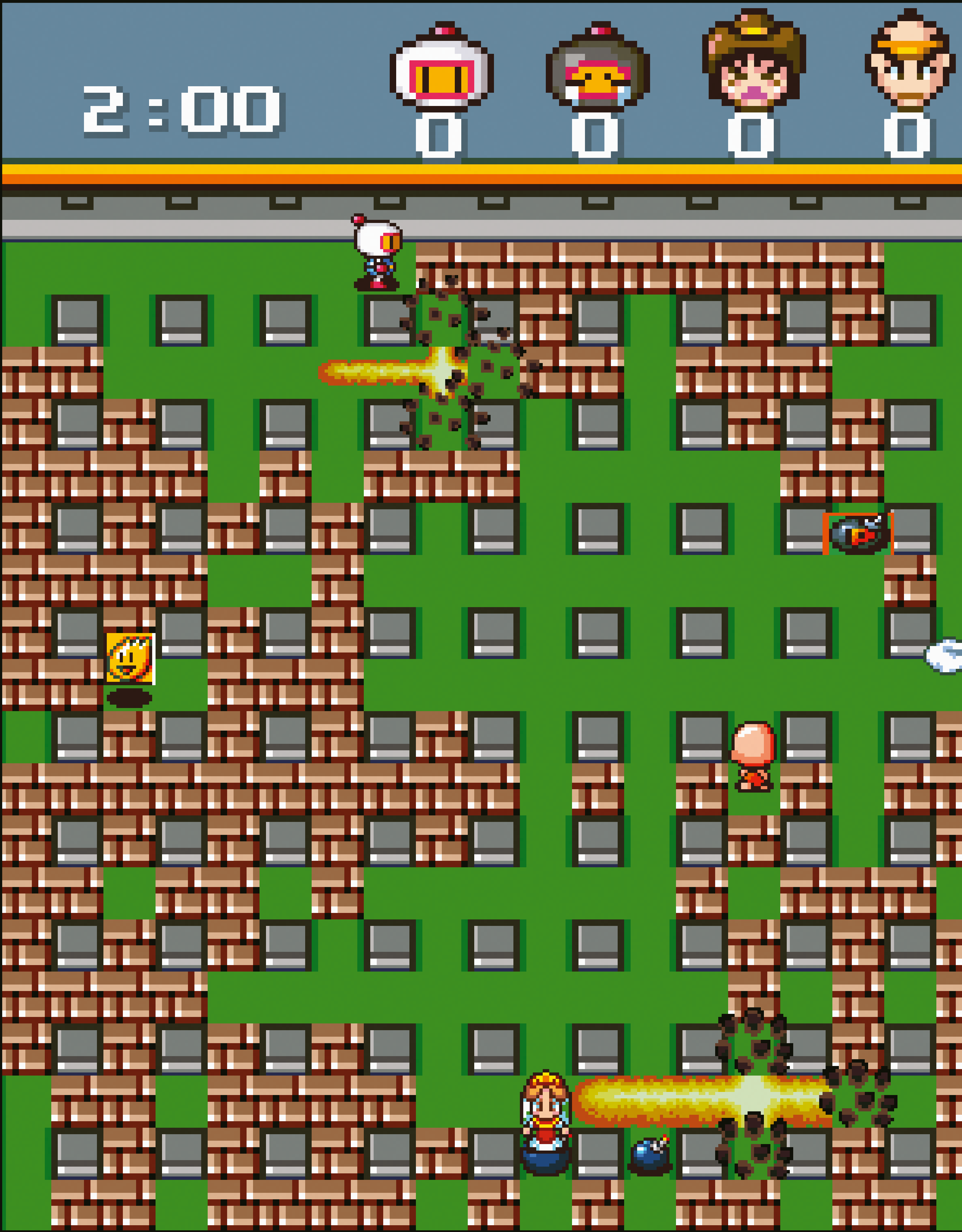
How Mark helped Naughty Dog create an icon

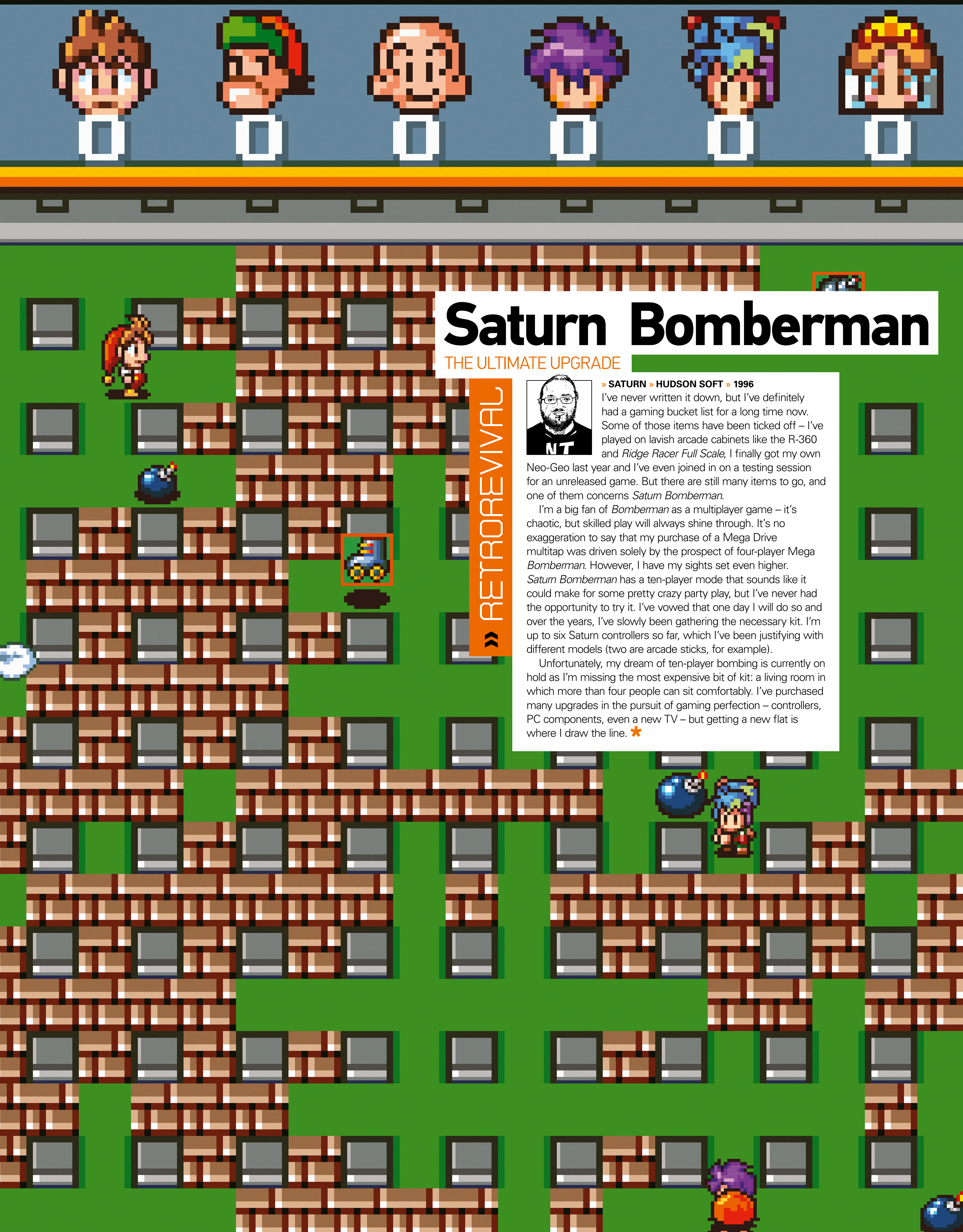
Before *Uncharted* and *The Last Of Us* developer Naughty Dog turned heads in 1996 with a new cartoon-like character that could so easily have taken its place alongside Mario and Sonic. Released in 1996, *Crash Bandicoot* sold around 6.8 million copies and spawned a long-running series but Mark Cerny played a major role in its success. "As the head of development at Universal Interactive Studios, I wanted to pursue a 'total quality' approach, meaning that the vision would determine the budget rather than the other way around."

One of his first acts was to rip up a deal between Universal and Naughty Dog which allowed the developer to have offices on the studio lot in exchange for allowing Universal first right of refusal. Mark believed the contract to be needlessly complex so he replaced it with a three-product development deal. "I focused on making sure that the proper concept and resources were in place," Mark says. "Those three titles, of course, became the three *Crash Bandicoot* games on the original PlayStation console."

The game was set to be called *Willie The Wombat* and Sony, which was rather impressed, wanted to take care of marketing and distribution, cutting Universal into the sales. "Universal would make less money per copy, but since Sony's marketing power was simply massive, it looked like a very good deal to all concerned," Mark explains. "So with Universal's seed money, Naughty Dog's talent, and Sony's marketing power… a legend was born!" The three games have been remastered and will be released for the PS4 on June 30, 2017 in a compilation called the *N.Sane Trilogy*.




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Saturn Bomberman

THE ULTIMATE UPGRADE

» SATURN » HUDSON SOFT » 1996

I've never written it down, but I've definitely had a gaming bucket list for a long time now. Some of those items have been ticked off – I've played on lavish arcade cabinets like the R-360 and *Ridge Racer Full Scale*, I finally got my own Neo-Geo last year and I've even joined in on a testing session for an unreleased game. But there are still many items to go, and one of them concerns *Saturn Bomberman*.

I'm a big fan of *Bomberman* as a multiplayer game – it's chaotic, but skilled play will always shine through. It's no exaggeration to say that my purchase of a Mega Drive multitap was driven solely by the prospect of four-player Mega *Bomberman*. However, I have my sights set even higher. *Saturn Bomberman* has a ten-player mode that sounds like it could make for some pretty crazy party play, but I've never had the opportunity to try it. I've vowed that one day I will do so and over the years, I've slowly been gathering the necessary kit. I'm up to six Saturn controllers so far, which I've been justifying with different models (two are arcade sticks, for example).

Unfortunately, my dream of ten-player bombing is currently on hold as I'm missing the most expensive bit of kit: a living room in which more than four people can sit comfortably. I've purchased many upgrades in the pursuit of gaming perfection – controllers, PC components, even a new TV – but getting a new flat is where I draw the line. *



>> Wonder Boy: The Dragon's Trap makes its stunning debut. Darran catches up with Mario Kart 8 Deluxe while the rest of the team becomes dangerously addicted to Puyo Puyo Tetris



Wonder Boy: The Dragon's Trap

STILL SITTING OH SO PROUDLY

INFORMATION

- » **FEATURED SYSTEM:** SWITCH
- » **ALSO AVAILABLE ON:** PS4, XBOX ONE, PC
- » **RELEASED:** OUT NOW
- » **PRICE:** £15.99
- » **PUBLISHER:** DOTEMU
- » **DEVELOPER:** LIZARDCUBE
- » **PLAYERS:** 1

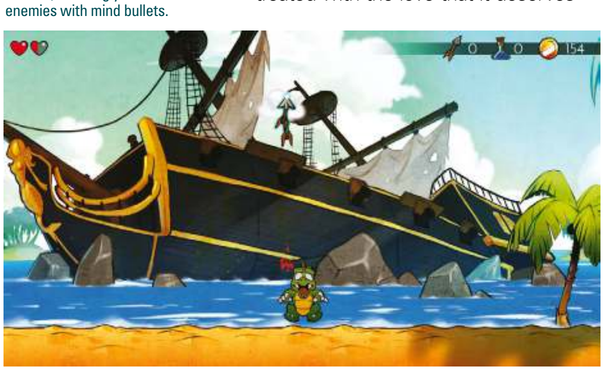


It's a sad fact that too few people have played *Wonder Boy III: The Dragon's Trap*. The game is an exploratory platformer that deserves to be heralded alongside the likes of *Metroid*, and according to our readers it's the very best Master System game. Yet compared to the likes of *Phantasy Star*, it has received little love in the form of rereleases – prior to this year, your options were limited to the Game Gear and PC Engine conversions, a Wii Virtual Console release and a Japan-only PS2 compilation. That feels like an injustice to us. Thankfully, this remake of the underappreciated gem isn't just getting a wide release, it's also been treated with the love that it deserves as Lizardcube is staffed with self-professed fans of the game.

For those of you unfamiliar with the 1989 original, *Wonder Boy III: The Dragon's Trap* follows on directly from the end of *Wonder Boy In Monster Land*. After defeating the Meka Dragon, our hero (or heroine, since the new version gives you the choice) is cursed and turned into Lizard-Man, a fire-breathing green scaly dude. In order to regain their human form our hero must venture through a non-linear platform world, taking advantage of various animal forms to traverse the environment and defeat boss dragons. Along the way you'll collect money with which to buy weapons and armour, as well as magical items to aid in combat.

The game design has aged remarkably well over the years, as the game does very little hand-holding – your natural curiosity and memories of past areas provide the impetus to explore most of the time. Level design is varied and combat is simple but elegant – your shield is always at the ready to block incoming projectiles, except during an attack, but it can't help you in encounters at close quarters. In fact, the extra buttons of your controller have been used to improve the experience, as special attacks can be toggled with

» [Switch] Unleashing magic attacks is much easier in the remake, enabling you to sear enemies with mind bullets.





BRIEF HISTORY

» *Wonder Boy III: The Dragon's Trap* debuted on the Master System in 1989 and completed the series' transformation from simple arcade platform action to the exploration-based template it's better known for. The remake is handled by Paris-based Lizardcube with the cooperation of *Wonder Boy* series creator Ryuichi Nishizawa.

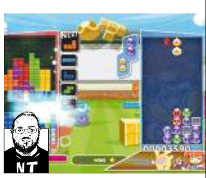
✱ PICKS OF THE MONTH



DARRAN

Mario Kart 8 Deluxe

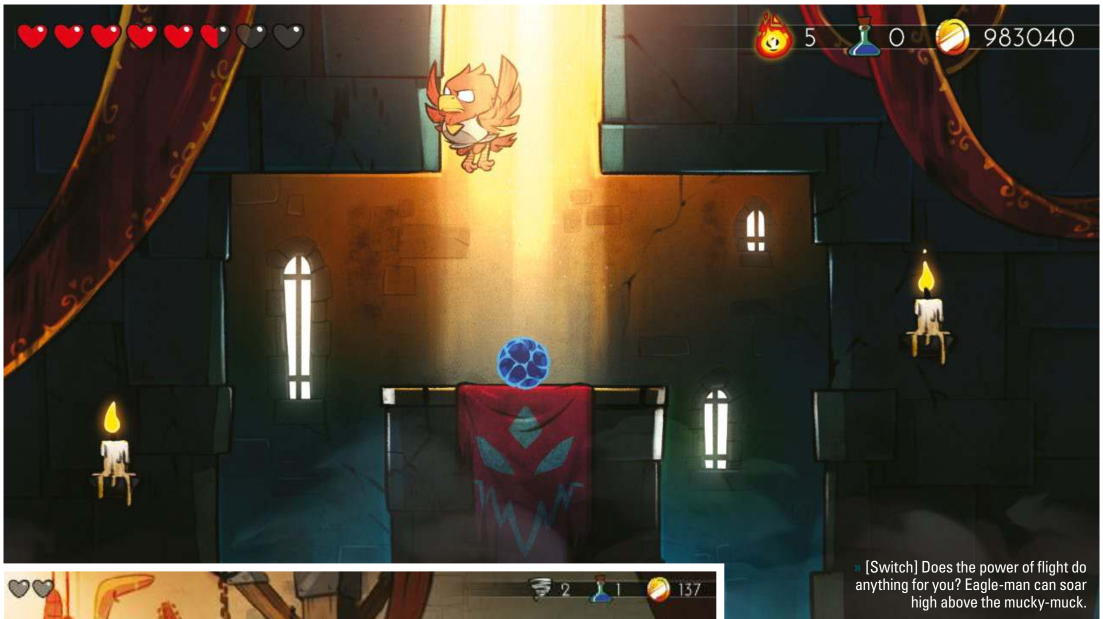
The original Wii U game was already impressive, but Nintendo has made all sorts of tweaks to the Switch version to make it the definitive edition.



NICK

Puyo Puyo Tetris

Every handheld needs a great puzzle game, and this fits the bill on Switch perfectly. It's been a highlight of lunch breaks in the office too. In short it's rather essential.



» [Switch] Does the power of flight do anything for you? Eagle-man can soar high above the mucky-muck.



» [Switch] Everyone's favourite one-eyed pig finally gets some lines in the remake!

the R button and activated with A. It's certainly vastly preferable to using button combinations, as was the case on the Master System. We'd have preferred it if instances of dodgy collision could have been eliminated, but it seems like these were essential to maintaining the original design, and they occur rarely enough that they're unlikely to ruin your experience.

While the game design remains relatively untouched, the presentation of the game has been given a total makeover. Brand-new HD visuals present the world in a style clearly inspired by European comics, with excellent cartoonish animation for the sprites and background visuals that go far beyond the original art, chucking out entire colour schemes and adding significant new details. Going for a unique style rather than simply overhauling the old art is a bold move that won't be to everyone's taste, as at times the game barely resembles the original version, but the quality of the work is undeniable. Music and sound effects have been overhauled but remain more recognisable, with the old tunes reinterpreted using real instruments including the violin, flute and mandolin.

The original audiovisual assets have been treated well here, too. As well as an upgrade to 60fps in retro mode, you're given the choice to use a scanline filter with adjustable strength, a CRT filter and gamma correction option. For audio, you can use the PSG soundtrack or the rarely-heard enhanced FM soundtrack from the original game. Best of all, these options are all mix-and-match. If you so decide, you can choose to go for razor-sharp pixel art with the new music and classic sound effects. The only extra option we'd have liked to have seen would have been to use the original screen ratio instead of a widescreen presentation, but we're really nitpicking at this point.





While there's a decent amount of challenge to be had, *Wonder Boy: The Dragon's Trap* doesn't last too long. Despite the presence of a save system – one which happily gives and receives passwords in the original Master System format, amazingly – it's possible that a single day of intensive play will see you through the game. We can't imagine a new player taking much more than that to beat it, and obviously that time decreases if you're familiar with the original. While this was an epic adventure by the standards of the day, it's now merely comparable to modern retro-inspired platform games such as *Shovel Knight*.

If you're an old fan of the Master System original, it's really hard to ask for more from *Wonder Boy: The Dragon's Trap*. The original game was already excellent, and the developers have offered a great new look for the game without neglecting retro presentation options. But even if you have no nostalgia for the original, this is well worth your time – it should appeal to any fans of *Metroid* and *Symphony Of The Night*-era Castlevania, and thanks to the overhaul it could pass as a new game. If you're remaking a videogame, this is a great benchmark to aim for. ✱

✱ WHY NOT TRY

▼ SOMETHING OLD
WONDER BOY IN MONSTER WORLD (MEGA DRIVE)



▼ SOMETHING NEW
SALT AND SANCTUARY (VITA)



In a nutshell

***Wonder Boy: The Dragon's Trap* is an awesome example of how to do a great remake, but above all it's still an excellent exploration-focused platform game. Old fans and newcomers alike are advised to give it a try.**

>> Score **90%**



Mario Kart 8 Deluxe

» System: Switch **» Buy it for:** £44.99
» Buy it from: Online, retail

It might be three years old now, but *Mario Kart 8* is still the best karting game on the market. Well it *was*… the Switch version improves an excellent game and shows other publishers how to do a proper HD remaster. The new Battle Mode captures the fun of the earlier *Mario Karts* and introduces a number of new tracks, while the Feather and Boo power-ups of earlier games make a welcome return. There's a huge amount of content to plough through, with the DLC tracks easily being on par with those found in the original game. Online is solid, and there are loads of multiplayer options. It's a bit annoying that everything is available from the start, losing a sense of progression, however, this is the definitive version of an exceptional racing game.

>> Score **91%**



PaRappa The Rapper Remastered

» System: PS4 **» Buy it for:** £11.99
» Buy it from: PlayStation Store

PaRappa's unique look and comedic sensibilities have aged well, but the old dog hasn't been taught the new tricks of modern rhythm action games, making this remaster a wasted opportunity. The archaic grading system can see you failing a song on the last lines after an otherwise perfect performance, which would be fine if the call-and-response gameplay hadn't always suffered from wonky timing – a problem which remains intact. Worse yet, there's no calibration setting to compensate for your TV's. The game's six songs feel like a slight offering, and alternative versions add little value. You might like it on a nostalgic level, but even then you'll need to have the right TV to make the most of it.

>> Score **52%**

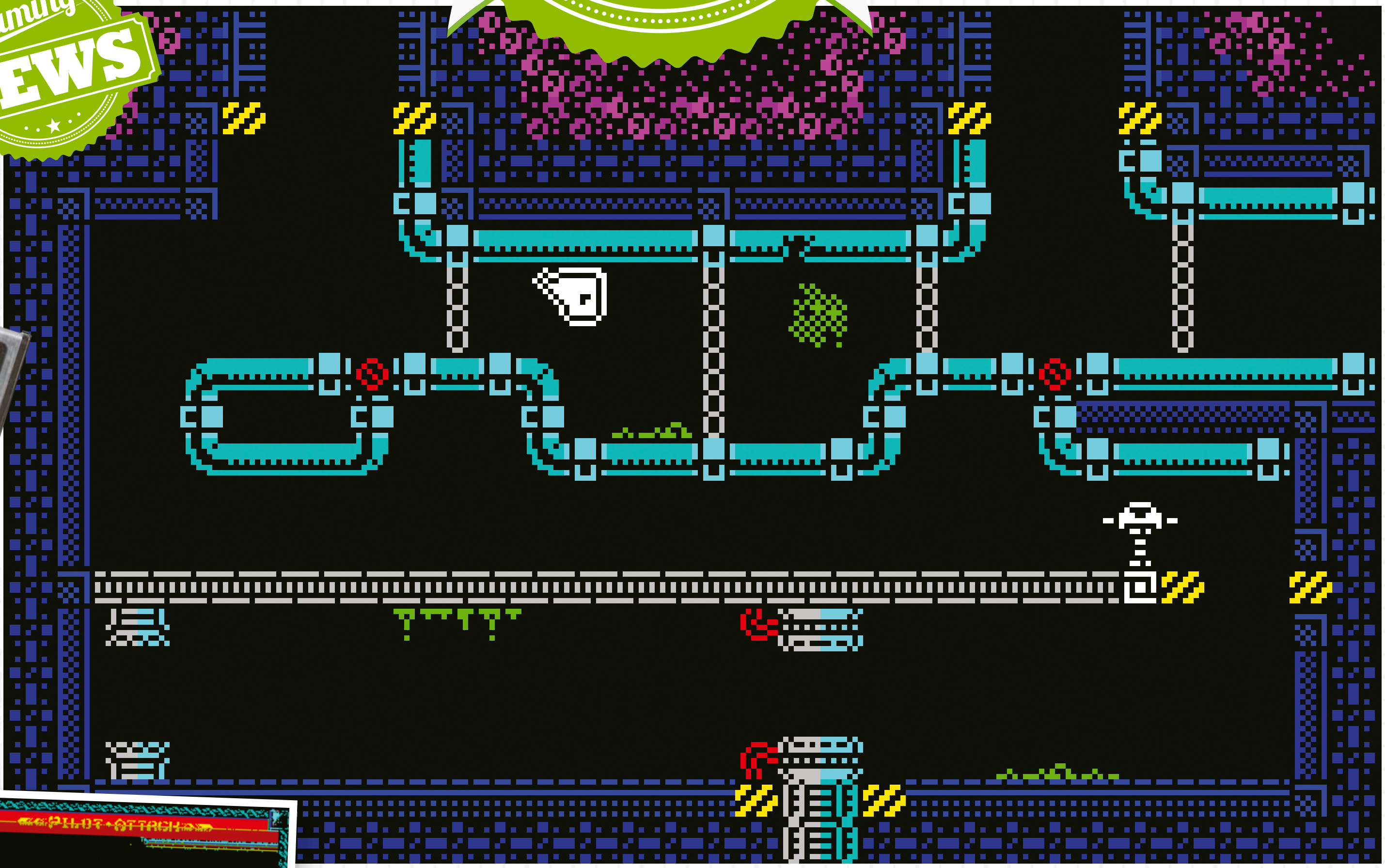


Puyo Puyo Tetris

» System: Switch (Tested), PS4 **» Buy it for:** £34.99
» Buy it from: Nintendo eShop, PlayStation Store

It's hard to imagine the precision of *Tetris* matching well with the strategy and demanded by *Puyo Puyo*, but this collision of puzzle series doesn't just work, it's incredibly comprehensive. You can play the two games with or against each other as desired, play both alternately in the Swap mode, or even take on the Fusion mode which mixes the two for a mind-straining challenge. The main adventure for single players does a good job of teaching mechanics through a saccharine story, but the real fun comes in the competitive multiplayer modes, which support up to four players locally or online and offer team play as well as individual competition. The game really shines on Switch too, thanks to the console's portability and multiplayer-friendly nature.

>> Score **90%**





» [ZX Spectrum] Don't be fooled by its cute look.



» [ZX Spectrum] Monty doesn't see eye to eye with his assailants.

RAINBOW HUES

There's been quite an influx of releases for the Spectrum of late, so we're going to look at four which grabbed our attention recently. For a start there's *Pilot Attack* from developer Misfit, a scrolling action game where the player is sat in the cockpit of a surprisingly-cute little plane. The gameplay reminded us a little of a web-based helicopter game called, er, *Helicopter* – the one that's similar *Flappy Bird* – so keeping the vehicle in the air and away from hazards is a major part of the challenge. Taking to the skies by heading to Kikstart.eu/pilot-attack-spec.

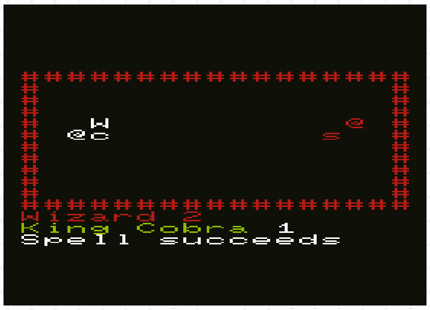
Working for Sandwich Ming was, for one college student using it to fund his education, a rather cushy job since the boss never seemed to need him… until it was time for the dreaded area manager's inspection and now our heroic sandwich artist is locked in until the place is clean – on the night before an important exam to boot – only to find that the restaurant is unnervingly different after hours, with the spirits of long-departed mops and mutated burgers still lingering to get in his way. Anybody who fancies being an impoverished student in a hostile fast food environment has plenty of options, but the best would be to give Stephen Nicol's *Takeout Freakout* behind Kikstart.eu/takeout-spec.

And we've got not one but two games from developer Andy Johns under his Bubblesoft label as well. The first is *Monty Mole And The Temple Of Lost Souls* which is a brand-new platform-based outing for Gremlin Graphics' furry former miner who, having evaded arrest in his previous adventures, has now located an almost-mythical temple and must head underground once more in search of artefacts. He'll need some help dealing with wildlife and the inner sanctums of the temple itself, so why not head to Kikstart.eu/lost-souls-spec and give him a… paw?

The second Bubblesoft outing is *Ooze* which is another platform game but this time with something of a twist. The titular puddle of goop moves in the expected way horizontally but doesn't jump around the levels because he has the ability to reverse the vertical direction of gravity. Falling upwards and then wandering around on the ceiling does take some getting used to, but is also a rather novel twist that makes the game stand out. The Ooze can be found falling through a long tunnel behind Kikstart.eu/ooze-spec.

NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at: **darran.jones@futurenet.com**



» [VIC 20] A spell in the dungeon.

SOMEWHAT CHAOTIC

Vichaos is, as the name sort of suggests, a version of Julian Gollop's classic Spectrum title *Chaos*, but running on the VIC-20. The game supports between two and eight wizards with any combination being human or computer controlled; everyone takes turns to cast spells and the aim is to be the last sorcerer standing.

If you have a 16K-expanded VIC and like the idea of either taking part in or perhaps just watching some turn-based magical combat play out head over to Kikstart.eu/vichaos-vic for more and the download.

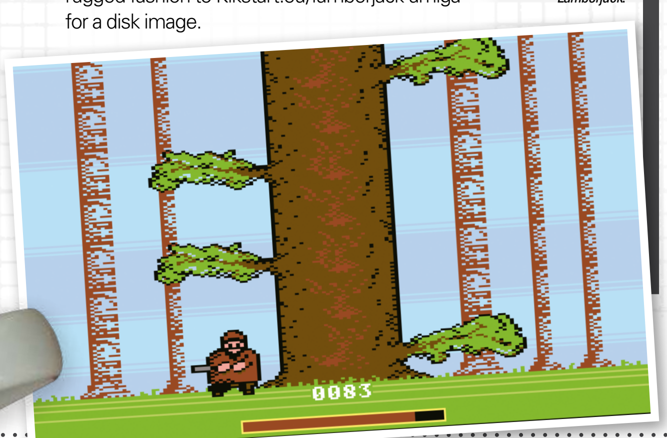
> **"Vichaos supports between two and eight wizards – human or computer controlled"**

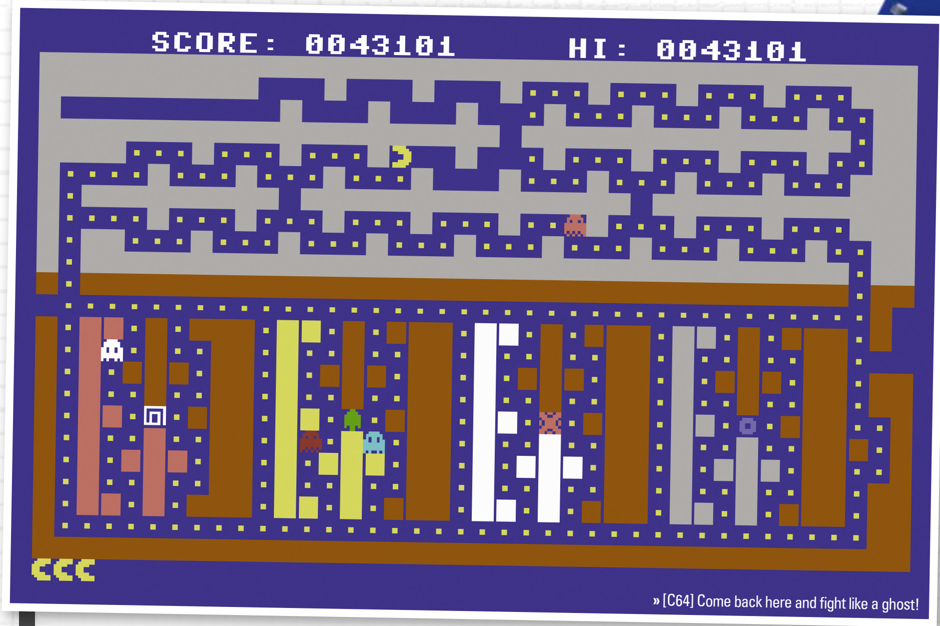
SLEEP ALL NIGHT

If you've ever fancied the idea of leaping from tree to tree as they float down the mighty rivers of British Columbia or perhaps singing about it with a chorus of Mounties, this might be the game that you've been waiting for. *Lumberjack* on the Amiga is a conversion from the C64 where the titular tree-feller knocks chunks out of a massive redwood, changing sides as he does to avoid branches as they move downwards.

Change into a red flannel shirt and stride in a rugged fashion to Kikstart.eu/lumberjack-amiga for a disk image.

» [Amiga] Get your tree-felling fix with *Lumberjack*.





» [C64] Come back here and fight like a ghost!

HOMEBREW HEROES

Gray Defender has been documenting development of GPAC Dementia Defender for the C64 on YouTube – head Kikstart.eu/gray-defender-yt for more



THE BIG INTERVIEW
Gray Defender

***GPAC Dementia Defender* has an unusual story, so where did that come from?**
I have always been terrified of brain diseases; my Mum passed away from brain cancer at 46, and my grandmother had Parkinson's. When a disease like cancer or Alzheimer's starts eating away at your brain, you are no longer 'you' anymore. So I wanted to usher in a sort of health theme. In *GPAC DD* you are eating vitamins and quashing harmful toxins.

Roughly how long did the game take to program and who was involved?
This game's development took about 15 months from start to finish, with the caveat that I did not work on it full time. My wife helped me with the game's theme, but other than that, this was a one-man effort. I was doing the instructional videos on my channel and learning the specifics of how to code the game as I went along. I used the CBM Studio cross compiler and that program's creator, Arthur Jordison, helped me quite a bit by sending me special builds here and there.



» [C64] Not many pills left to gobble up.

And with hindsight, is there anything you'd have done differently?
I could have put more effort into giving the ghosts more of their own little personalities. I would have liked to have built in more 'puzzle' elements into the game. A two-player option would have been fun, with both players on the screen simultaneously. Overall I far exceeded what I originally thought I would be able to accomplish, and I am proud of the game I put out.

What sort of feedback have you received from Commodore 64 gamers?
I have been blown away by the support and feedback that I have received. It was great to hear back from the community, learning how many hours they put into playing the game. I also received validation from the Commodore scene people with them 'cracking' my game and adding a trainer. I had a fellow YouTuber create a special tape loader version. I never expected anything like that.

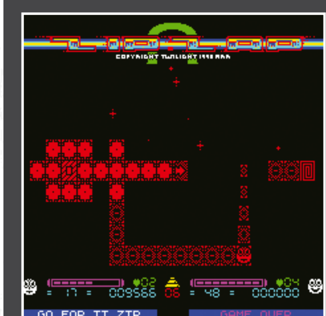
Do you have any future plans our readers might be interested in?
For now my future plans are to attend the PRGE in October where I plan to give away some boxed copies. If I were to do another game, I would want it to be an original sort of platformer/puzzler. I love the kind of games that really get you thinking. But really, for me, with *GPAC Dementia Defender*, I was hoping I could show people that programming on the Commodore 64 can be fun and exciting. I hope I inspire some young people to give it a shot, like I did. You are only limited by your imagination.

Gaming REVIEWS

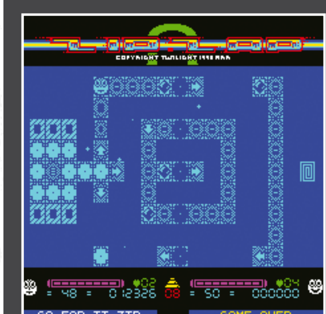
DO YOU REMEMBER?

Zip 'N' Zap on the Oric is a well-presented and challenging action puzzle game for one or two players which was developed in the late Nineties by Jonathan Bristow. The objective on each stage is simply to lead one or both of the titular characters to the safety of the exit, although this is easier said than done when tiles are either weakened or crumble to dust once they've been passed over and a quota is required to open the exit.

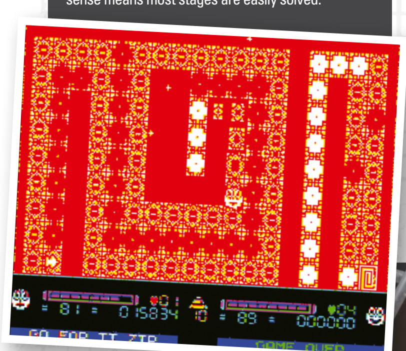
Dexterity is a much-desired skill when racing around in order to stay ahead of collapsing platforms, but players will have to put some thought into their route because it's very easy to get stuck in a dead end or miss tiles that need to be passed over twice. Kikstart.eu/zipzap-oric will take you there.

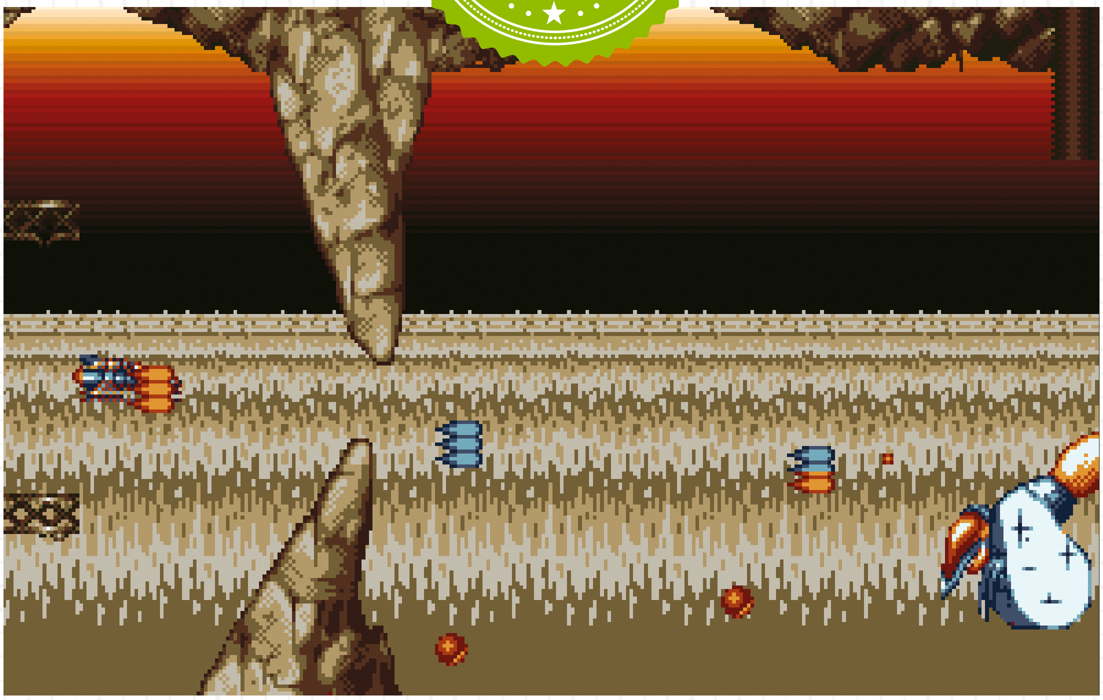


» [Oric] *Zip 'N' Zap*, a game that's simple in practice, but surprisingly tough in its execution.



» [Oric] It looks confusing, but a little bit of common sense means most stages are easily solved.





» [Amiga] Meet the new boss, more insect-like than the old boss.

STANDARD DEVIATION

» **FORMAT:** COMMODORE AMIGA » **DEVELOPER:** ENERTIA DEVELOPMENTS » **DOWNLOAD:** KIKSTART.EU/DEVIATION-AMIGA » **PRICE:** FREE



» [Amiga] We're not fans that it's styled on *Project X*, but there's no denying it's a solid shooter.



» [Amiga] Some of the weapons are suitably over-the-top like this gigantic laser cannon.

Intergalactic wars are a regular backdrop for shoot-'em-ups, and this particular skirmish has been raging for around a century when the Standard Deviation Mark 3 returns to Earth after time spent exploring deep space. There are no communications from space traffic control and, rather ominously, a planet-wide scan for life forms reveals a large number but lists the type of every single one as 'unknown' so either the human race has been viciously hunted down by ruthless alien invaders or, as the attack ships descended from the heavens, everybody decided that now would be a good time for a game of Hide And Seek!

The invaders are hostile on contact so, regardless of where mankind may have got to, the only options are to return fire or be blasted to pieces and, while the Standard Deviation might be a long-haul exploration vessel, it still offers an array of weapons even if they'll need to be powered up. Some enemies leave behind a round icon with a 'P' when destroyed which move an indicator along on the status bar and hitting space activates or sometimes upgrades the selected weapon. Along with a cavalcade of enemies and showers of bullets, each stage has a boss battle and the last item on the power-up bar is a shield which comes in handy for these.

Standard Deviation was developed near the end of the Amiga's life but fell by the wayside when it received average review scores and some less-than-favourable comparisons to *Project X*. The graphics are something of a mixed bag with detailed sprites over sometimes lacklustre backgrounds and the gameplay feels mixed up with the first stage more difficult than the second and the bonus tunnel sections merely getting in the way. A £24.99 price tag would have been hard to justify when there were equally solid titles available on budget, but now it's been recovered and released for free it's easier to overlook those flaws and enjoy the wanton destruction.

» **Score 69%**

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RMD

» **FORMAT:** MSX » **DEVELOPER:** N.I. » **PRICE:** FREE
» **DOWNLOAD:** KIKSTART.EU/RMD-MSX



» [MSX] Face to face with a heinous, if somewhat immobile, boss.

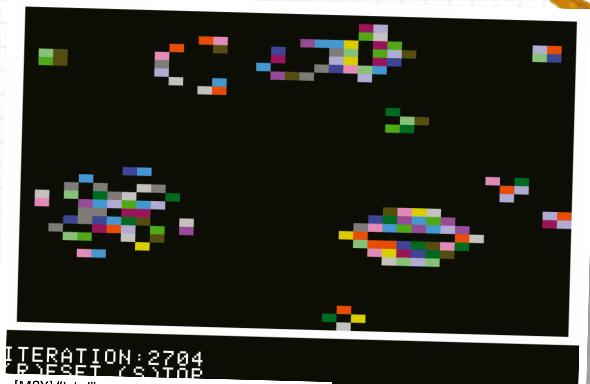
It's still the same old story, a fight for love and glory and marauding aliens invading what we'll assume is the Earth since *RMD* didn't arrive with a storyline. It does have a significant number of air and ground-based enemies, though, and while the player's craft has a decent gun it loses power when taking a hit so keeping still isn't an option. There are items to find on the ground and the one which looks like a spanner will award the player with a precious unit of power.

This is a relatively simple but challenging vertically-scrolling shoot-'em-up which doesn't offer anything unique to make it stand out from other blasters on the MSX. That isn't necessarily a bad thing and it's still fun to zone out with for a while, but the depth isn't really there to keep most players coming back in the long term.

» Score **72%**



» [MSX] It's rather simple, but *RMD* still packs a challenge.



» [MSX] "I do like to scroll upon the prom, prom, prom."

A GAME OF LIFE

» **FORMAT:** APPLE II » **DEVELOPER:** XTOF » **PRICE:** FREE
» **DOWNLOAD:** KIKSTART.EU/LIFE-A2

***A Game Of Life* on the Apple II is an implementation of John Conway's game which was created in 1970.** The screen is divided into cells which are alive or dead, with a series of simple rules governing which state they're in after each turn. If living cells have two or three neighbours they survive to the next turn with any other number killing the cell off. Three neighbours next to an empty cell can create a new life.

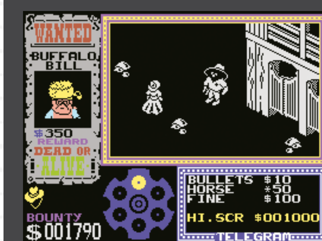
In some ways this is an early 'god game' but with no interaction required once things have been set in motion; the player creates their world before sitting back to watch the consequences unfold with the cells either settling down into patterns or more often dying off and for some players this process can be both relaxing and oddly addictive as their colonies slowly mutate over the course of the game.

» Score **85%**

ROUNDUP

Charles 'Iceout' Grey's *An Unusual Dream* is a unusual text-only adventure for the Apple II with a simple, two-key input where most of the keyboard cycles through possible options and the enter key selects. Kikstart.eu/unusual-a2 will send you to the adventure.

Mariuszw has produced some great conversions of Ultimate's isometric 3D games. Released on the same day for the Atari 8-bits, C64, C128 – two versions for 40-column and 80-column displays – and Plus/4 is a port of the Stampers' scrolling western adventure *Gunfright*. Head to Kikstart.eu/gunfright-a8 for the Atari version and Commodore owners will want to reach for the sky at Kikstart.eu/gunfright-cbm.



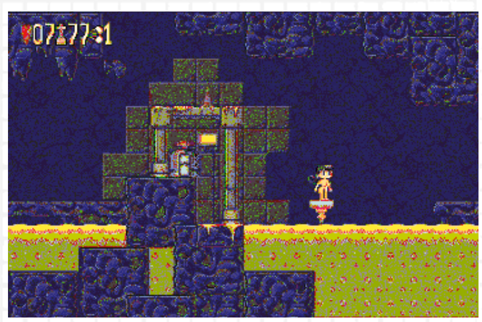
MEGA CHERIL PERILS

» **FORMAT:** MEGA DRIVE » **DEVELOPER:** THE MOJON TWINS » **DOWNLOAD:** KIKSTART.EU/CHERIL-MD » **PRICE:** FREE

Cheril's adventures have lead her to a city in turmoil where a virus has turned some of the population into monsters and everyone else has rather sensibly legged it, leaving only a force field over the afflicted area in their wake. After passing through the field our heroine has to deal with the inhabitants to escape, but they'll need to be stunned before the final, head-stomping blow can be delivered.

Fortunately there are devices all around the levels which freeze enemies in their tracks for a few seconds which leaves them vulnerable to attack but, while the devices are reusable, they're not always conveniently placed so there'll be quite a few mad dashes from button to baddies. The Mega Drive isn't being taxed, but *Mega Cheril Perils* is an entertaining game which players can attack in one sitting or use level codes to continue where they left off.

» Score **87%**



» [Mega Drive] A fun little platformer that features some great sprites and smart level design.



» [Mega Drive] You'll need good reflexes to clear some areas.





MAILBAG

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STAR LETTER

PUTTING THE 'NES' IN SADNESS

Dear **Retro Gamer**,
What the hell is Nintendo playing at? It made pretty much the best plug-and-play retro console ever, and managed to get people so interested that the thing was routinely selling for way over its actual value. With demand like that, it could be laughing all the way to the bank for the rest of this year. Instead, the NES Mini been discontinued less than six months after it was launched and it's now going for £200 second-hand.

Doesn't Nintendo get how much money is being left on the table? Sure, the thing got hacked, but if they didn't see that coming then even Specsavers couldn't help it. By killing the device, it has cut off a popular way to acquire great retro games legally, and pushed players right into the arms of people making emulation boxes.

I can't figure out how this move makes any business sense at all. Can you help me figure this bizarre decision out?

Liam Renfrew



» [NES] The Nintendo Classic Mini: NES is now discontinued – did you manage to get yours?

We're just as baffled as you are, Liam. The console has been constantly undersupplied since it was introduced in November, and as you rightly point out there's still so much demand that prices have gone bonkers. We initially thought that supply would follow the Amiibo pattern of small initial shipments to prove demand for larger orders, but it seems that won't be the case.

The only scenario that makes sense is one in which Nintendo negotiated some very short licensing agreements for the third-party games on the system, thinking that the system would have a brief shelf life. Well, there's one other possibility, we suppose. NES Virtual Console games could just start showing up on the Switch at £3.49 each – but that'd just be cynical, wouldn't it?





» [PS4] Indie racer *Redout* uses untextured polygons, but throws shaders and speed on top so you'd hardly notice.

LESS PIXELS PLEASE

Salutations, **Retro Gamer** chaps,
I was pleased to see the return of your 'Retro Inspired' section, because it's good to see how old developers are tapping into nostalgia with their new games. However, the *Yooka-Laylee* one did get me thinking. If it's possible to sell a game off N64 nostalgia now, why is it that so many indie games still choose to follow the NES graphical style, or some other low-detail graphical style?

I understand that it has nostalgic appeal now, but pixel art can show so much more than that. The gigantic Neo-Geo sprites of old have their own appeal, as does the beautiful scenery of the kind that Henk Nieborg draws. Or, hey, why not another style of retro graphics entirely? We don't have enough vector games, nor flat-shaded polygons. Bring those back!

James Johnson

To be fair, very few games on platforms that Henk Nieborg has developed for have pixel art as good as his – there's an inimitable style there. Still, to answer your question, indie developers often use that simplistic NES-style pixel art because it's quick and easy to draw, and offers a way to tap into the nostalgia market. We'd definitely like to see indie developers produce more vector games, though, and some *Virtua*

EVOLVING RG

Hi **RG**,
I've been thinking: as a regular buyer and subscriber, I've heard the team at **RG** talk of the old Eighties videogame mag, 16/48, a games magazine that came on a tape, and had game demos and articles on a cassette. It was like an early Internet!

Anyway, I had a flash of inspiration during an evening walk, and the only thing I could think about was a 16/48-style revamp of the **Retro Gamer** magazine, on a choice of old game machines and computers, from the 2600 to the GameCube. There could be homebrew demos run on emulators, and download links to play on computers! This could give developers a lot more exposure, which could give a lot of chances to people who deserve to get off Greenlight and give Game Boy-styled games to the world of Steam.

Right, now all you need to do is get it working.

EmolgaGame

It's been a while since we've seen someone try an interactive magazine. The last one we can remember is PSi2, a PS2-era publication from Thin Ice Media, a subsidiary of the peripheral manufacturer Datel. Because the company was already programming things like the Action Replay cheats discs, it could draw on that expertise to create interactive magazines.

Unfortunately, while we like the idea, we don't see it happening. We don't have access to that kind of programming knowledge for one system, let alone the dozens within our remit. We'd have to hire an army of programmers to get a single issue made, and that's before we even try to source ROM cartridges! At that point, the magazine might become a bit (enormously) less profitable.



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***Fighter*-style boxy models wouldn't go amiss either. Just leave out the awful textures of the 32-bit era, and we will be fine.**

THAR SHE BLOWS

Hi **RG**,

I'm hoping you can settle a dispute for me. Whenever I've had a problem with my cartridges over the years, I've usually fixed it with the time-honoured 'blow over the contacts' solution. However, a friend of mine recently told me that this is actually bad for the cartridges and that I'm probably only making the problems worse. Surely I haven't been doing it wrong for all these years – and if I have, what should I be doing instead?

Luke Ingram

He's not wrong! Blowing into your cartridges will do nothing at best, and cause problems at worst due to particles of saliva ending up on the metal contacts. Our preferred cleaning method is to put a small amount of isopropyl alcohol on a cotton bud, and use that to clean the contacts (being sure to clean up and down the contact, rather than from left to right). Then use the dry end to remove excess residue. This has worked wonders for us, even breathing new life back into Neo-Geo MVS cartridges carrying years of arcade grime.

PANTS!

Hey **RG**,

Do you think there's any chance we could see a feature on *GamesMaster* this year? I know gaming-related TV shows haven't been covered too frequently in **Retro Gamer**, but you've occasionally done features like the *Micro Live* one and the Violet Berlin Desert Island Disks. Now that the show's celebrating its 25th anniversary and you're with the same publisher as *GamesMaster* magazine, it feels like the perfect time to consider it, don't you reckon?

Martin Harrison

It's definitely an interesting idea for a feature! We will see if we can get some of the people involved to talk about their experiences on the show.

DISCUSSED THIS MONTH

Puzzle games

A retro gaming night in Darran's shed turned into a festival of competitive puzzle games – *Bust-A-Move 2* was followed by *Magical Tetris Challenge*, which eventually gave way to *Pokémon Puzzle League*. What was on the office Switch the next morning? The *Puyo Puyo Tetris* demo, of course.





» These pins don't need your breath on them! There are better ways to clean your cartridges.



From the forum

Every month, **Retro Gamer** asks a question on the forum and prints the best replies. This month we wanted to know…

What's the scummiest thing you've done in a multiplayer game?



» [Arcade] Holding onto the disk at final moments of a *Windjammers* match is a signature of our own Scumbag Nick™.

RodimusPrime

Championship Manager, using the editor to make up loads of 16-to-17-year-old players with amazing stats and signing them all up in a multiplayer game with around three other players. My mates still wonder what happened to Wolfgang Gang in real life.

ianpmarks

I remember exploiting the fact in SNES *FIFA Soccer* that meant if you shot from a certain point at the edge of the box you were almost certain to score. I used it often against my friend, until he cottoned on and banned it.

HalcyonDaze00

Call Of Duty 4: Modern Warfare – Killhouse map, crouched down in the far top corner behind the wall with the Godly RPD, doing nothing but looking down the sight and slaughtering everyone who appeared in front of me, including those just spawning! Never had so much online abuse.

ncf1

Me and David Simpson used to play *Bubble Bobble* on his Amiga every lunchtime – and we often forgot to return to school. During the game's 'Extend' screens we used to wrestle to try and 'submit' the other with either armbars or leglocks in particular. But if I saw by, say, level 50 he was outscoring me I would simply get up and punch him in the head, repeatedly, until he would lose consciousness and forget that he was winning the game.

Ironically forgetting, of course, that *Bubble Bobble* is a team effort, so in fact I lost in the end because he was indeed a most decent player.

The Laird

The funniest thing I have seen in a multiplayer game was by brother and my nextdoor neighbour playing *Striker* on the Atari ST back in the day. My brother fouled my neighbour in his own box with the score at 1-1. It was right on the penalty spot and so he was awarded a free kick. But my brother totally confused him by yelling, 'Penalty!' My neighbour then turned the player round and booted the ball into his own net to score an own goal.

Bluce_Ree

The original host advantage: giving your mate your third-party second controller.



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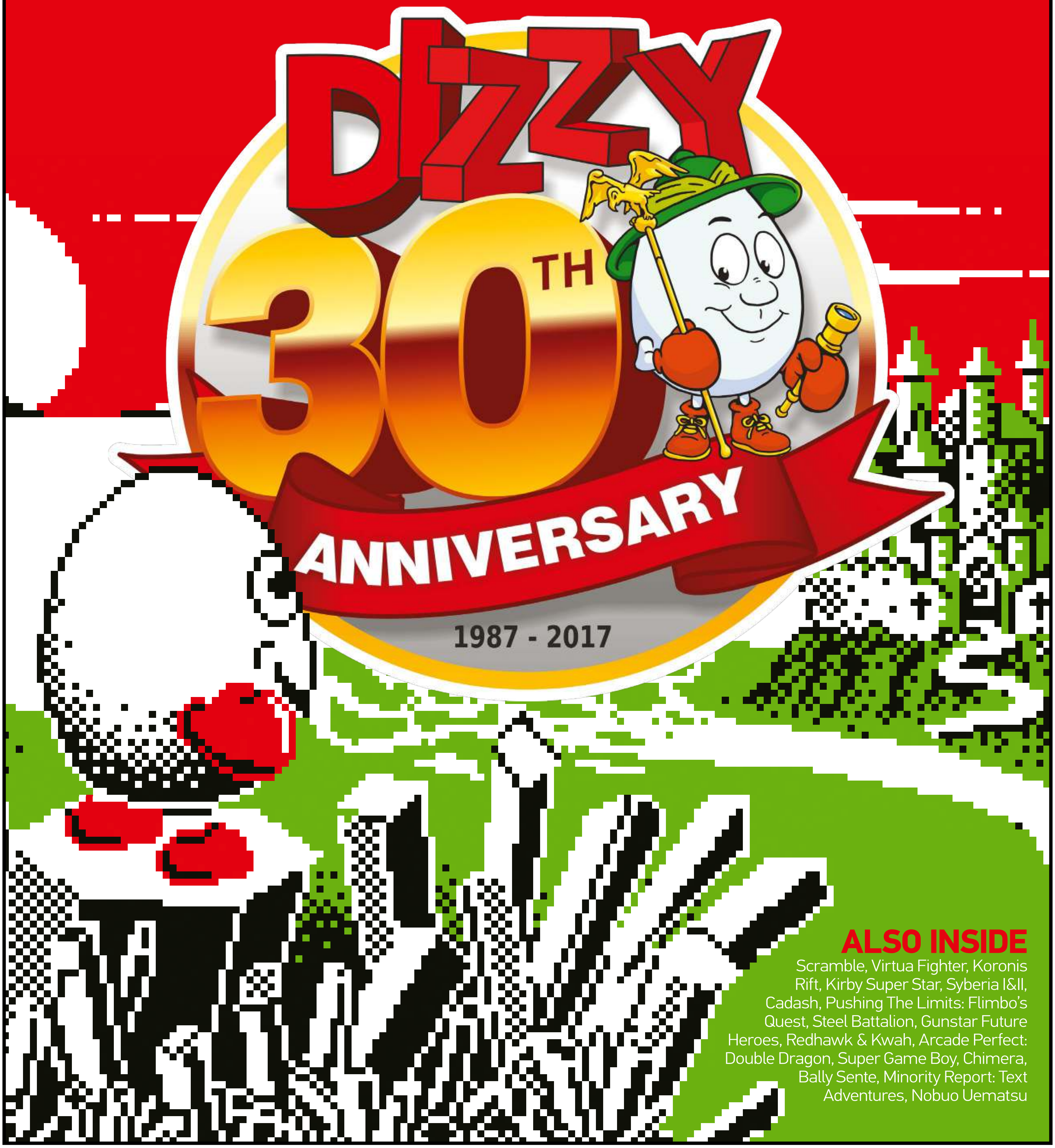
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ENDGAME



SOUL BLADE: VOLDO'S ENDING

» Legend has it that there exists a unique weapon: Soul Edge, which grants immense power to its wielder and even shapes itself into their preferred form. Unfortunately, it's also incredibly evil and has a tendency to corrupt anyone who uses it. Many fighters from around the world want it, but only one can claim it – and in this case it's Voldo, the guardian of the deceased merchant Vercci's fortune...



01

» Clad in fishnets, blindfolds and more, Voldo steps into Vercci's vault, flooding the place with light for the first time since his departure. With the undead pirate Cervantes De Leon defeated, Soul Edge is now in his possession.



02

» With the acquisition of this prized weapon, Voldo has satisfied the last wish of his dead master. Knowing this brings the deranged guardian of the vault immense satisfaction. In fact, he might be a bit too satisfied with his success...



03

» The freakish fighter begins to caress the sword, rubbing the blade up and down his face in glee. It isn't enough, though – his insanity means that he's never sated, and he begins to frantically increase the pace of his ritual.



04

» Oh no! The legendary blade of eternal evil has shattered in Voldo's bizarre embrace. We don't know whether this is from the wear and tear of battle, or simply the sword's desire to get away from this weird dude. As the pieces fall to the floor, Voldo is forcefully knocked down to the ground (he probably enjoyed it).



05

» Now on his knees, Voldo can merely clutch his head and exhale as he is unable to scream. His calamitous and entirely avoidable failure shatters what remaining sanity he has, as he hears Vercci calling him. Pity poor Voldo – eternally loyal to a master too dead to care about his failure.


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